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Vol. II

TRANSCRIPT OF RECORD

Supreme Court of the United States

OCTOBER TERM, 1935

No. 20

EAGLE & STODDART, INC., ET AL., OWNERS OF CARGO ON STEAMSHIP "GALILEO", PETITIONERS,

vs.

ELLERMAN'S WILSON LINE, LTD., OWNER OF STEAMSHIP "GALILEO"

ON WRIT OF CERTIORARI TO THE UNITED STATES CIRCUIT COURT OF APPEALS FOR THE SECOND CIRCUIT

PETITION FOR CERTIORARI FILED MARCH 19, 1935

CERTIORARI GRANTED APRIL 15, 1935

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A. Where they came down.

Q. And that is the only fastening that you used to make your covers tight to the bulkhead?

A. Just held it onto the bulkhead; that is all.

Redirect examination.

By Mr. Keating:

Q. Mr. Ellison, what became of the scrap logs on this voyage?

A. The scrap logs?

Q. Yes.

A. When the ship was run on the shore, I said to the third mate——

Q. Never mind telling me what happened; I am asking you what was done with it. Was it lost?

A. It was lost.

Q. It was lost?

A. Went down, and it was lost.

Q. These were the only logs *what* you saved?

A. This is all I saved.

Q. Did you save the ship's articles?

A. I did.

Q. Did you lose any of your clothes?

A. Yes, I did lose my clothes.

Q. Mr. Ellison, while you were on board this ship, did you ever wash down No. 3 'tweendecks with a hose?

A. No, sir; oh, no, sir, never did that.

CHARLES BARRON, a witness called on behalf of the respondent, being first duly sworn, testified as follows:

Direct examination.

By Mr. Keating:

Q. Are you a master mariner?

A. Yes, sir.

Q. How long have you held a master's license?

A. Since 1895.

Q. How old are you, captain?

A. 58.

[fol. 332] Q. How many years have you been going to sea?

A. 44 years.

Q. Did you start at the bottom and work yourself up to captain?

A. Yes, sir.

Q. Where was your home, when you started?

A. Hull.

Q. Have you been with the same company all these years?

A. Sailing on sailing ships, and then when they were owned by Bailee & Leetham, and then later by the Wilson line, and then finally with the Ellerman's Wilson line.

Q. So you have been with the same interests how many years—same steamship company or its predecessor in interest, approximately.

A. About 39 years.

By the Court:

Q. Are you still with them?

A. Still with them, sir.

Q. What are you doing now?

A. I am here, sir.

Q. I mean, are you captain of a boat now?

A. Yes, sir, I was until I came here.

Mr. Keating: We had to take him off a ship to bring him here.

By Mr. Keating:

Q. Is your master's license a British Board of Trade license?

A. Yes, sir.

Q. For what—unlimited?

A. Unlimited.

Q. Unlimited?

A. Unlimited, all seas.

Q. How many years have you actually served as a master as distinguished from having had a master's license? How many years?

A. 29 years.

[fol. 333] Q. You have been a shipmaster actually in command 26 years?

A. 29 years, that is up to now; 26 years up to the time of the "Galileo".

Q. About how many steamers have you been captain of?

A. I would say approximately about twenty.

Q. And how did they vary in tonnage?

A. From 1000 tons up to 6000 tons.

Q. Were you master of the "Galileo" in August, 1926?

A. Yes, sir.

Q. How long had you been master of the "Galileo"?

A. From October, 1925.

Q. You joined her in October, 1925?

A. Yes, sir.

Q. As master?

A. As master.

Q. Had you served any other steamers of the same line running between Hull and New York?

A. No.

Q. This was your first?

A. First voyage to America.

Q. First voyage in that trade?

A. In that trade.

Q. Was there a coal strike in England in the Spring and Summer of 1926?

A. Yes, sir.

Q. Now, prior to June 21, where had you taken your coal for the round trip prior to June?

A. 1921?

Q. 1926, prior to June, 1926.

A. In Newcastle, and once in Rotterdam, in Holland.

Q. About what is the capacity of the ship's bunkers, if you remember, the permanent bunkers?

A. About 740 tons; I could not say exactly.

Q. When you were coaling on the other side for that round trip prior to June, before the coal strike, did you fill up your permanent bunkers?

A. Yes.

[fol. 334] Q. In Hull?

A. In Newcastle.

Q. And did you carry any extra coal, any surplus coal?

A. Yes.

Q. Where did you carry that?

A. In No. 3 lower hold.

Q. And when you got to New York, was there always something done regularly about the coal that was carried in No. 3 lower hold?

A. Yes; we discharged the coal from the lower hold and put it in the permanent bunkers.

Q. And used that up?

A. And used it up.

Q. And that process went on up until June, 1926?

A. Until the strike.

Q. Until the strike?

A. Yes.

Q. You arrived here, I think it appears from the chief officer's testimony, on or about June 21st, 1926?

A. Yes, sir.

Q. Did you bring over any coal for the round from England on that voyage, in No. 3 hold, or was the coal strike on?

A. No, the coal strike was on.

Q. So you had no coal in No. 3 at that time?

A. No.

Q. In No. 3 lower hold?

A. In No. 3 lower hold, no.

Q. Now, when you were here, did you receive any orders? I don't want you to tell me what the orders were; but did you receive any orders with respect to bunkering in New York for the round voyage?

A. Yes, sir.

Q. From whom did you receive the orders?

A. From Mr. Sanderson.

Q. Who was Mr. Sanderson?

A. The agent for the Wilson Line.

Q. He was connected with the New York agents of your owners—is that correct?

A. Wilson, of Hull.

[fol. 335] Q. Where is Mr. Sanderson—do you know?

A. He has died since.

Q. He is dead?

A. Yes.

Q. Will you tell me what your orders were with respect to coaling, in June, 1926—what orders did you receive?

A. Take sufficient coal for the round voyage, that means from New York to New York, via Hull to New York again.

Q. I show you a cable, captain, dated June 23, 1926, and I ask you if you ever saw that cable before. If you did not see it, say so; if you did, tell me whether you saw it or not.

A. No.

Q. You never saw that cable?

A. Never saw it.

Q. Now, when you got the order to coal for the round, what did you do with respect to it?

Mr. Jones: May I see that cable? (Examining same.)

Mr. Keating: I offer this cable in evidence, with Mr. Jones' permission.

(Same received in evidence and marked Respondent's Exhibit C.)

Q. Now, after you received the order to bunker for the round voyage, did you take the matter up with the chief engineer?

A. Certainly.

Q. And what did you and the chief engineer do, together, if anything, about—first off, of all, did you discuss the amount that it would be necessary to take?

A. Yes, sir.

Q. And do you remember how much you decided would be necessary?

A. No.

Q. The chief engineer and you did decide on some amount; is that correct?

A. We conferred together as to what amount we should take.

Q. After you had conferred, did you go and make any [fol. 336] examination of the ship to determine where you would put the coal?

A. Well, we arranged to put it in the—fill the permanent bunkers up and No. 3 'tweendecks and No. 3 shelter decks.

Q. You decided to put the coal in those spaces?

A. Yes.

Q. Who decided that?

Mr. Jones: I object, if your Honor please, as to who decided it; it is a conclusion.

Mr. Keating: This is the man in charge of the job.

Q. Was it your decision?

A. I decided; it was my decision; we both agreed.

Q. You decided it?

A. I decided it; I made the final decision; there was no dispute about it.

The Court: Just so that Mr. Jones may be protected, I overrule the objection and give an exception to him.

Q. You heard the chief officer testified with regard to the space of No. 3 'tweendecks and No. 3 shelter deck?

A. Yes, sir.

Q. Was his testimony accurate?

A. As near as I can say.

Q. I show you these sketches, and just ask you to look at Exhibits 10, 11 and 12, and ask you whether, approximately, those sketches are correct as far as you can recollect (handing same to witness).

A. On sketch No. 10——

Q. That is Exhibit No. 10?

A. Exhibit No. 10, the wooden bulkhead which separates the shelter deck from No. 2 shelter deck, I think is a little [fol. 337] bit too far forward, according to my recollection.

Q. Other than that, are the sketches all right?

A. Other than that they are; yes.

Q. Before you decided to load this surplus coal into No. 3 shelter deck and No. 3 'tweendecks, did you actually go down into those spaces in June, yourself, with the chief engineer, and do you recollect whether you went down?

A. I don't recollect.

Q. You don't recollect?

A. I don't recollect.

Q. Had you, while you were master of the ship, ever carried any coal—prior to June—in No. 3 'tweendecks?

A. No.

Q. In June, latter part of June, 1926, it has been testified that No. 3 'tweendecks and No. 3 shelter decks were filled up with coal; is that correct?

A. That is in June?

Q. June.

A. Yes, sir.

Q. And was that the first time that any coal had ever been carried in the 'tweendecks, so far as you know?

A. As far as I know.

Q. While you were master?

A. While I was master.

Q. You sailed from New York, I believe it has been testified, on July 2nd?

A. July 2nd.

Q. In July, I think it was on July the 2nd, or thereabouts, for Hull?

A. Yes, sir.

Q. And that you arrived in Hull, in June, the 19th, approximately.

A. Approximately July 19th.

Q. July 19th?

A. Yes, sir.

Q. That you carried grain in No. 3 lower hold on that June voyage; is that right?

A. Yes, sir.

Q. And was that grain discharged in Hull?

A. Yes, sir.

[fol. 338] Q. In order to get that grain, what had you done to the coal in No. 3 'tweendecks and shelter decks?

A. Took that down and shifted it into the permanent bunkers.

Q. That is, you had taken some of it out?

A. Taken some of it out; approximately 200 tons.

Q. Out of the 'tweendecks?

A. Out of the 'tweendecks and the shelter deck.

Q. And that was shifted into your permanent bunkers?

A. It was shifted into the permanent bunkers.

Q. When you were in Hull, in June, do you know what was intended to do with your ship when you came back?

A. I heard the ship was, on the next voyage, would be laying up to get refrigerated—to get her refrigeration fixed up.

Q. To get her refrigeration fixed up?

A. To get her refrigeration fixed up.

Mr. Jones: You said in June; you meant in July?

The Witness: In July.

Q. In other words, when you completed your August trip, you were to be laid up in Hull?

A. August voyage.

Q. In order to install refrigeration?

A. To put refrigeration in.

Q. You sailed from Hull, and you eventually arrived in New York, I believe it was testified it was August the 17th; am I right about that—about August the 17th?

A. About August the 17th.

Q. When you arrived, do you know about how much coal you had left in your No. 3 'tweendecks?

A. About 160 tons.

[fol. 339] Q. That is as near as you can figure?

A. As near as I can tell, to a few tons; it is impossible to tell to a ton.

Q. Had you expected to take any coal here in August on your return home, any extra coal?

A. Well, we had to have sufficient to take us back to Hull.

Q. And were you going to coal for the round on that voyage?

A. No.

Q. After you arrived here, did you receive any orders about coaling here in New York in August for the round voyage?

A. Yes, I ordered coal sufficient to coal us back to Hull, and then about August the 20th or somewhere around there we received an order to take 850 tons of coal for the "Francesco", who was taking our place.

Q. In other words, you were not going to take the coal for the round voyage yourself?

A. No.

Q. You were to take some extra bunkers for some other ship?

A. Yes, sir.

Q. What was the name of that ship?

A. I believe the "Francesco".

Q. What were you going to do with those extra bunkers when you got to Hull?

A. Discharge it into the "Francesco".

Q. I show you a cable dated August the 20th, 1926, and ask you if you ever saw that cable before. If you didn't see the cable, tell me (handing same to witness).

A. Never seen it before, sir.

Mr. Jones: I have no objection to this, this is from the owners in Hull to the Wilson Line here in New York.

Mr. Keating: To the New York agent.

Mr. Jones: No objection.

[fol. 340] Mr. Keating: I offer this cable in evidence as Respondent's Exhibit D.

(Same received in evidence and marked Respondent's Exhibit D.)

Q. Who told you that you were to take this extra coal, this extra 850 tons, for transference to the "Francesco"?

A. Mr. Sanderson.

Q. That is the same Mr. Sanderson that you spoke of a moment ago, that is now dead?

A. Yes, Mr. Lloyd Sanderson.

Q. After you got those orders to take 850 tons, what did you do?

A. I told the engineer the orders that we were getting, and we conferred as to where we should put them.

Q. And what did you decide?

A. Well, after the engineering measuring up the space in No. 3 'tweendecks and No. 3 shelter deck, we just about could get them in there.

Q. And you decided to carry them there; is that it?

A. Decided to carry them there.

Q. In connection with that decision, did you have any advice from the shore?

A. None whatever.

Q. Did anybody offer you any advice or suggestion as to where those bunkers should be put?

A. No, sir.

Q. This matter was decided by you in consultation with whom?

A. And the engineer.

Q. And he alone, nobody else?

A. I cannot say; probably the chief officer was there; we usually work with the chief officer; we got to work together.

Q. But nobody was there from the shore?

A. Nobody at all; they had nothing to do with it.

[fol. 341] Q. Does your company maintain a marine engineer or marine superintendent in New York?

A. No.

Q. You have got a superintending engineer in Hull; is that right?

A. Surely.

Q. You make your reports to Hull, do you, or to New York, in regard to your—in regard to anything you want to do about the ship?

A. To Hull.

Q. Do you report to New York, to anybody in New York, about the matters affecting the ship other than the loading of cargo, and so forth?

A. No, it is not necessary. If we want any repairs done, we let them know.

Q. And they send over?

A. No, they do not send it; I inform MacMillan that I want it, and that is left with me.

Q. The matter is entirely in your hands?

A. Entirely in my hands.

Q. When you are in New York?

A. Anything in connection with the ship is entirely in my hands.

Q. Did you go down into No. 3 'tweendecks before what has been called here the new coal was put in? Did you go down into No. 3 'tweendecks at any time?

A. Yes, we loaded the lower hold with grain, and then I was very particular that the coal should not get down to the grain; I saw the chief officer batten up this hatch, as near as I can tell, until 5 o'clock, and I left on the 24th of August, and I went down there specially to warn him that he should make a good job of this here, and he was down there and the engineer was also down there.

Q. What did you see the engineer doing?

A. He was looking at the coal, I would say.

Q. Was he walking around?

[fol. 342] A. Yes; he stood talking, I mean to say, and remarked upon the coal, that the space would just about get the new coal in.

Q. Now, did you make any personal inspection of the coal?

A. When I was there, I saw the coal there, and saw the way it was stowed.

Q. How was it stowed?

A. Well, it was taken over the hatch coaming, the sides of the hatch—and trimmed so it sloped towards the hatch.

The Court: From the sides toward what?

The Witness: From the sides of the ship to the hatch coaming, they were trimming it so that it would slope

towards the hatch coaming, in a sloping position, I should say from two to three feet from the deck, and about 3 feet from the hatch coaming.

By the Court:

Q. Two or three feet all over the deck?
A. From the top of the deck.

By Mr. Keating:

Q. From where it is up against the bulkhead?
A. From where it is up against the bulkhead, and from where it was against the ship's side.

By the Court:

Q. The pile was about two or three feet high on the deck?
A. The pile was seven feet high.
Q. And two or three feet from what?
A. From the deck head, being seven feet deep.
Q. From the shelter deck?
[fol. 343] A. From the shelter deck, which made a difference of about three feet at the hatch coaming.

By Mr. Keating:

Q. That is, between it and the hatch coaming?
A. All around the sides of the hatch coaming, had to clear that out, so as to get the tarpaulin battened down—nailed down.
Q. Now when would all the coal in No. 3 'tweendecks have been taken out of that space after, if you had continued your voyage?
A. Well, out of the 'tweendecks?
Q. Out of No. 3 'tweendecks.
A. It would be taken out at the rate of 40 tons a day.
Q. That was the coal that you—you burned that coal up as your bunkers?
A. Yes, sir.
Q. Were your permanent bunkers full when you left New York on your August voyage?
A. Well, I could not say.

Q. You had taken them—where had you put the coal for transference, that you intended to transfer to the "Francesco"—where was that coal?

A. In No. 3 'tweendecks and No. 3 shelter decks.

Q. When would it have come out of there, and when would it have been transferred to the "Francesco", on what date?

A. It is all according to what sort of a passage I had home—immediately I arrived in Hull.

Q. What is your ordinary sailing time from New York?

A. 16 days.

Q. So, what you are saying is, about the 13th or the 14th of September?

A. Give me a calendar, and I will be able to tell you.

Q. Of course, we can figure that out later; that would have been about 14 days after you left New York?

A. No, about 16 days.

[fol. 344] Q. About 16 days after you left New York?

A. That would be about the 14th of September.

Q. That coal was in a position to be taken out at that time; is that correct?

A. Yes, sir.

Q. Just what were you going to do with the steamer in Hull when you arrived there?

A. After I had discharged her, they were going to lay her up and put this refrigerating plant into her.

Q. Now, did you see them loading so-called new coal into the ship, into the No. 3 'tweendecks?

A. Yes, from the bridge; I did not inspect it.

Q. You were not there?

A. No, I was not there.

Q. You just happened to see them, as the stuff came aboard?

A. As the stuff came aboard; I mean, I saw the lighter alongside, and I saw them bringing it aboard the ship.

Q. How did they take it off?

A. Put it into hand buckets.

Q. Is that put into hand buckets on the lighter?

A. It is trimmed into buckets on the lighter and then dumped into barrows.

Q. Wheelbarrows?

A. Wheelbarrows; and dumped into the hatch coaming.

Q. Somebody wheeling the barrow over to the hatch coaming?

A. Yes, sir.

Q. And then dumped it down into the hatch?

A. Yes, sir.

Q. You saw them doing that, did you?

A. Yes, I saw them doing that.

Q. You did not inspect the coal?

A. No; the engineer did it.

Q. Who is it, on the "Galileo", who had charge of the coal?

A. The engineer.

Q. And by the "engineer", do you mean the chief engineer?

A. The chief engineer.

[fol. 345] Q. Are you a coal man?

A. No, sir.

Q. Are you a coal chemist?

A. No, sir; they call me a bonehead.

Q. Are you a combustion engineer?

A. No, sir.

Q. Is there anybody else on board the ship that has got charge of the coal in your steamer?

A. The engineer is the man, the chief engineer; I look to him, I mean to say, for everything in connection with the coal.

Q. Whose responsibility is it—he is responsible, is he?

A. The responsibility is his.

Q. Whose duty was it, if anybody's, to make an inspection of the so-called old coal in No. 3 'tweendecks in August, 1926, before any new coal was taken in?

A. The engineer's—chief engineer's.

Q. Was it anybody else's duty?

A. No, not to make a special examination of it.

Q. You did not make a personal examination?

A. No, I did not make a personal examination.

Q. Whom did you rely on?

A. The chief engineer.

Q. Did you see him down there?

A. I saw him down there; yes, sir.

Q. Do you know whether he had been down there often?

A. I should say he had.

Q. Had he been—had you seen him in and out of there on the voyage over, do you know?

A. Well, no, I could not say.

Q. You could not say?

A. I could not say, I kept no track.

Q. How many times did you see the chief engineer that you can recall now, if you can recall seeing him, that you do remember seeing him down there—once?

A. I remember seeing him down there the day before.

[fol. 346] Q. Is that the second occasion?

A. That is the second occasion; he was down there because——

Q. What was he down there for the second occasion for?

A. I could not say; making an inspection of the coal, I presume.

Mr. Jones: I move to strike out whatever the witness presumes.

The Court: It may be struck out.

Q. Now, who had charge of receiving that coal on board the ship?

A. The chief engineer.

Q. And who had supervision over its stowage on board?

A. The chief engineer.

Q. Now, did they eventually fill this space with coal, No. 3 'tweendecks and No. 3 shelter decks?

A. Yes, sir.

Q. Now, had you ever seen the wooden bulkhead which is in the fore part of No. 3 'tweendecks between No. 2 'tweendecks and No. 3 'tweendecks—had you ever seen that bulkhead?

A. Yes.

Q. Was that bulkhead—was that a temporary wooden bulkhead?

A. No; what you call a permanent bulkhead.

Q. Was it there when you joined the ship?

A. Yes.

Q. You don't know, do you, how long it was there?

A. No.

Q. It was there during the entire time you were on the ship?

A. The entire time I was there.

Q. Whose job is it on the ship, to inspect the bulkhead?

A. I trusted the chief officer with this duty.

Q. You trusted the chief officer to do that?

A. Yes.

Q. Did you ever, personally, inspect the bulkhead closely?

A. I am accustomed to go down in the holds every day.

[fol. 347] Q. For a look around?

A. For a general look around when they are loading cargo.

Q. When you got to Hull following what I would call the June voyage, but which really began in July, did you have any damage to the cargo in No. 2 'tweendecks from the coal that you carried on that voyage?

A. None whatever; if there had been any, I would have been the first to know about it.

Q. All those complaints immediately come to you?

A. All those complaints are made to me as soon as the cargo is discharged, or soon after. I am very particular about this coal getting mixed up with this cargo; that is the reason—one reason why I went down in the 'tweendecks, to see the chief officer battening up the holes and cracks, to make sure it was done to my satisfaction.

Q. You wanted to see that the coal dust did not get into any of the cargo?

A. I wanted to see that the coal dust did not get into any of the cargo.

Q. That is the reason you went down there?

A. That is the reason I went down there.

Q. Captain, are you able to form any opinion, from having seen that bulkhead, whether it would be possible for any amount—any considerable amount of air to go through it, assuming there was coal filled in on one side and cargo on the other?

A. Yes, I mean to say there would be very little.

Mr. Jones: He asked you whether you can form an opinion on that.

Q. Can you form an opinion on that?

A. This is what we call a dust-proof——

[fol. 348] Mr. Jones: I move that that be struck out.

The Court: Strike it out.

A. Yes.

Q. He says yes. That is, you have an opinion, you answer "Yes" to that?

A. May I have the question read over to me again?
Q. Yes, surely.
A. I was not quite clear on it.
Q. Just repeat it to him.

(Question repeated by the reporter as follows:)

"Captain, are you able to form any opinion, from having seen that bulkhead, whether it would be possible for any amount—any considerable amount of air to go through it, assuming there was coal filled in on one side and cargo on the other?")

In other words, can you form an opinion in your mind; in other words, what opinion have you, if you have an opinion?

A. I would think that no air would get through that bulkhead.

Q. No; I want to know whether or not you have any opinion, whether it might or might not; that is something that I am going to ask you about afterwards; I want to know whether you have something in your head, an opinion.

A. Yes, yes.

Q. Now, captain, could, in your opinion, assuming that coal was on one side of that bulkhead, which you saw, and cargo on the other, would it have been physically possible, in your opinion, for any considerable amount of air to pass through the bulkhead?

A. It could not.

Mr. Jones: I object to that, if your Honor please. In the [fol. 349] first place, I don't think the witness is qualified, has shown any qualifications to answer the question. My main objection is that the coal on one side and cargo on the other, and it seems to me that the question does not state the facts which he should state. I assume what my friend means is whether it is possible through the cargo and through the bulkhead, and then through that coal, and that I think is quite irrelevant to the inquiry. I think it is vague, and does not help us very much. I would like to have the captain describe to us the bulkhead so we may know something about it.

Mr. Keating: You can cross examine on that; he is a master mariner in charge of the ship; he can describe it.

The Court: I sustain the objection on the ground of incompetency, with an exception to you. I will specify that I

mean it is incompetent in form, and in addition to that I think it is a matter of common knowledge, and not a proper subject for expert testimony; and furthermore, the witness himself has not been proved competent on the question of whether or not air would pass through. I don't know that he knows any more about that than I. If it is a proper subject for expert testimony, you have got to qualify this man on his ability to determine when a partition is air-tight. I don't think it is a proper subject for expert testimony. Seems to me it would be a matter of common knowledge from the construction of that bulkhead.

Mr. Keating: I should think so too. I imagine that you [fol. 350] and I and all of us know what that bulkhead is, and can form our own opinions; but I think I am entitled to ask the question. Perhaps if I go along a little you will see whether I can ask him any competent question.

The Court: The only ground upon which I would consider admitting it would be, not on the question of whether or not the bulkhead was air-tight, but whether it was a proper degree of care that he was exercising. I am afraid it is incompetent on that also. The one question here is whether or not he was negligent himself, and his own ideas on the subject, I suppose, might be relevant, the ideas in his head at the time that he ordered this thing done, may be relevant upon the question of whether or not he was exercising due diligence.

Mr. Jones: I would like for him to tell how the bulkhead was made, so we can form our own opinion as to whether the thing was air-tight or not.

The Court: All right, go ahead, and note an exception for the respondent.

(Long discussion off the record.)

Q. Now, Captain, did you have a full crew on board, on the August voyage?

A. Yes.

Q. Did you have enough food on board?

A. Yes, sir.

Q. And may I assume that you had enough coal on board?

A. Yes, sir.

Q. Did you have any leaks in the ship?

A. None whatever.

Q. Had you been in any accident?

A. No, sir.

[fol. 351] Q. Anything about the ship needing repairs?

A. No.

Q. That you know about?

A. No, not on that voyage.

Q. Was the "Galileo"—do you know whether the "Galileo" was classed in any classification society—was she rated by anybody on the August voyage?

A. A-1 at Lloyds.

Q. Subsequently it was discovered, after you left New York, that there was a fire, and you turned around and eventually your ship foundered, having been filled with water by the Fire Department?

A. Yes, sir.

Q. And the ship was a total loss?

A. The ship was a total loss.

By the Court:

Q. Has it ever been put into service again?

A. No, sir.

Mr. Keating: I am informed, sir, she was raised to get her out of blocking the fairway out here, and subsequently sold for scrap in Baltimore and broken up. She was submerged for over a year. These pictures were taken immediately after she was raised, these photographs (indicating).

By Mr. Keating:

Q. Captain, had anybody connected with the New York agents given you any instructions where to stow this coal?

A. No, sir.

Q. Did you get any instructions at all about the coal, other than to take it?

A. None whatever; they left it entirely in my hands.

[fol. 352] Q. Did Mr. Sanderson or anybody in the New York office, ever come aboard your ship while you were loading?

A. Yes, occasionally.

Q. Do you know whether they did on this voyage or not?

A. I presume they did; every voyage they come aboard one day, probably the day we arrive or the day we sailed.

Cross-examination.

By Mr. Jones:

Q. Captain, I believe you stated that on your June voyage, you carried grain in your lower No. 3?

A. Yes, sir.

Q. And you had your lower No. 3 permanently fitted up for carrying grain, didn't you?

A. Yes; I don't quite understand what you mean by "permanently fitted up".

Q. You had a grain feeder running from the shelter deck down into the lower hold?

A. That is so.

Q. Isn't it a fact, that in your August voyage, your agents here had booked grain for your lower No. 3?

A. Yes.

Q. So you could not carry the coal in lower No. 3, could you, because the agents—your agents—had booked grain for the lower No. 3?

A. No, they had not.

Q. You did not book the grain, did you?

A. No; they booked it.

Q. Oh, they had booked it?

By the Court:

Q. Who booked it—the agents?

A. The agents would book it.

Q. Sanderson?

A. Sanderson.

[fol. 353] By Mr. Jones:

Q. And Sanderson was in charge of the owner's business here in New York, wasn't he?

A. Represented them.

Q. He had sole charge, didn't he?

A. No.

Q. Who else had charge, any charge?

A. I am in charge.

Q. Outside of yourself, Sanderson was the one who had the whole charge?

A. Well, he represented the owners.

Q. You did not book any cargo for the ship, did you?
A. No.
Q. You had nothing to do with booking cargo?
A. No.
Q. And isn't it a fact that there was a full cargo booked for this ship?
A. No.
Q. Were not you informed by Mr. Sanderson, when you came to New York, that he had booked a full cargo for your ship?
A. No.
Q. Did you make up this stowage plan?
A. No.
Q. Where was this stowage plan made up?
A. That was made up——
Q. I am showing you now Exhibit 13.
A. What am I to look at?
Q. Read him the question.

(Question repeated by the reporter.)

A. Made up on the pier.

By the Court:

Q. Who made it up?
A. One of the clerks on the pier.
Q. One of the clerks on the pier?
A. Yes.
Q. Sanderson's clerk?
A. Sanderson's clerk; yes, sir, that was made up when the ship was loaded.

[fol. 354] By Mr. Jones:

Q. When the ship was loaded?
A. Yes.
Q. And didn't you know that there was no other place on the ship where you could have put this additional quantity of coal?
A. Yes, there was.
Q. One minute—which you were carrying for this "Francesco", other than the places which you already did put it in?
A. I could have put it anywhere.

Q. Where could you have put it?
A. In No. 1 hold.
Q. No. 1 hold?
A. No. 2 hold or No. 3 hold.
Q. Wouldn't you have carried the wheat that they had booked for these holds?
A. Probably shut it out.
Q. You would not have carried it at all?
A. No.
Q. Be frank with me, Captain, isn't this a fact, that you, if you had carried this coal in compartments marked "A" and "B" on this stowage plan, you would have to shut it out, and not carried it at all?

Mr. Keating: Show him the plan.

Q. There is the plan; look at it and see and tell me if what I say is not so.
A. You mean to infer that no other place that I could have put the coal in down there?
Q. Exactly so; I say, it is a fact?
A. It could be put in other places.
Q. Where else would you have put it?
A. I could have put it in the shelter deck and No. 2.
Q. What would you have done with the cargo in the [fol. 355] shelter deck of No. 2?
A. There was none in it.

The Court: Let us see the plan.

Q. You mean to say that you could have carried this additional quantity in the shelter deck of No. 2, the whole additional quantity?
A. Yes.

The Court: Where—right here is it (indicating)?
Mr. Keating: It is marked No. 2, with some sort of a letter.

Q. You are showing us the space that you say you could have carried it in?
A. Down here (indicating).
Q. Mark that space with an "A"—that is already marked with "A".
A. That is No. 2, I presume (indicating). No. 2 shelter deck.

By the Court:

Q. You mean put it on the upper deck?
A. What we call the lower, or the 'tweendecks, or shelter deck.

(Discussion off the record between Court and counsel and witness.)

Mr. Keating: This space that you are talking about is marked with an "F"?
Mr. Jones: The space he is talking about is marked "F".

Q. Now, the space you have marked "F", Captain, shows from the plan that you had steel plates in there, and that [fol. 356] those steel plates were 60 feet long. Look at the plan and tell me if that is not so.
A. I cannot say, I cannot say that.

Mr. Keating: Have you got your glasses, Captain?

Q. All right; ask him the question over again. Read it to him.

(Question repeated by the reporter.)

A. How many plates?
Q. I didn't ask you how many; I am not asking you that question; I am asking you——
A. Steel plates?
Q. —the one question and only question is, now, does not the plan show that you had steel plates in what you call No. 2 shelter deck, and the steel plates were 60 feet long?
A. How many of them?
Q. I have not asked you that question.
A. Yes, sir.
Q. It does show that, doesn't it?
A. Yes.
Q. And shows that the steel plates were 60 feet long?
A. It says so here.
Q. Doesn't it show that there on the plan?
A. There is 8 steel plates, looks to me like it.
Q. It says on this "8 steel plates 60 feet"?
A. This may be inches.
Q. You know what you mean by inches, you put two

dashes for inches, and one for a foot, don't you? Am I not right about that, Captain?

A. Yes.

Q. The mate testified that this space which is marked "B" on this plan was 33 feet long; you agree with him on that, don't you?

A. Yes.

Q. And will you explain to me whether it would be possible to put steel plates 60 feet long in a space 33 feet long?

A. Won't you repeat that question.

[fol. 357] Q. I won't ask you that question; it is argumentative, and I should not have asked it; anybody would know as well as you do that it could not be done. But I will ask you this question: Isn't it a fact that if you had placed coal in No. 2 shelter deck, you would have had to place the coal on top of these steel plates?

A. I cannot recall where these steel plates were put.

Q. Isn't it obvious, Captain, that you could not have carried the coal in that compartment without putting the coal on top of the steel plates?

A. I may have put it in the forepart.

Q. How long a space was that space?

A. I could not say.

Q. You don't know? I can find out from your plan and demonstrate that without asking you about it. Now, Captain, your orders directed you to carry these bunkers, didn't they?

A. Yes, sir.

Q. And they, if they directed you to carry it as bunkers, you knew that they wished you to carry it in this space or these spaces "A" and "B", didn't you?

A. Carry what?

Q. You knew that they wished you to carry it there in the permanent or temporary bunker space of this ship?

A. They did not say where I was to carry it.

Q. Didn't you know, that if you carried that coal in No. 2 shelter deck, you would have to carry it as cargo?

A. No. It is carried as cargo wherever you put it.

Q. Captain, you carried the coal in No. 2 'tweendecks on a previous voyage?

A. No, we did not.

Q. No. 3 'tweendecks, on a previous voyage, I beg your

pardon; and when you got to Hull, didn't your owners come aboard?

A. A representative of the stevedores.

[fol. 358] Q. A man in charge of the owner of the ship, at Hull, came aboard, didn't he?

A. Yes.

Q. A marine superintendent?

A. Yes, sir.

Q. The highest man who has anything to do with the physical operation of your ships, came aboard, didn't he?

A. I could not say.

Q. Well, didn't he come aboard every voyage?

A. Yes, sir, no doubt he does.

Q. And he went all over the ship, didn't he?

A. I could not say.

Q. Doesn't he always go all over the ship?

A. Not necessarily.

Q. Isn't it a part of the routine for him to go all over the ship?

A. I don't know.

Q. Do you mean to say that you have been a master of a ship—how many years?

A. 29 years.

Q. 29 years, and you don't know that when you come to your home port, your marine superintendent does not go all over the ship?

A. It is not necessary to go all over the ship.

Q. Is not that a part of the routine of ship operation?

A. No, unless he had something to go for.

Q. Didn't you tell him, as a matter of fact, that you carried this coal in your 'tweendecks?

A. No.

Q. Did you not make a report to him as to the amount of coal you took?

A. He knows that already.

Q. From whom?

A. The engineer.

Q. The engineer makes a report to him?

A. No.

Q. How does he learn, if he does not learn it from the engineer?

A. He makes his report to the engineer superintendent.

Q. To the engineer superintendent?

A. Yes.

[fol. 359] Q. And is he the man in charge of that part of the owners' business?

A. The bunkers, yes.

Q. He came aboard, did he?

A. I could not say.

Q. Is not that man, that permanent engineer superintendent, in your own employ?

A. Yes.

Q. And the permanent marine superintendent in your own employ?

A. Yes, sir.

Q. And every time you come to Hull, this man comes aboard, these men that I have just mentioned, come aboard, don't they?

A. I don't know; if it is necessary, they would come.

Q. What?

A. If it is necessary, they would come on board.

Q. Do you mean to say that the practice in your line is for a marine superintendent, and an engineer superintendent, to come on board only in case of accidents?

A. Oh, no; they come on board and go all over the ship.

Q. Don't they inspect the ship?

A. They inspect the ship occasionally.

Q. How often do they inspect the ship?

A. Well, I could not say; when necessary.

Q. When do you say that it is necessary?

A. If there is anything happens, or there is a request to come aboard.

Q. Do you mean to say that they only inspect the ship, only when you have an engineer's request made to inspect the ship?

A. No; it may be inspected.

Q. How often do they inspect the ship?

A. I could not say; depends upon the nature and how thorough an inspection is needed.

Q. Be frank with me, captain——

Mr. Keating: I object to this characterization of the witness' testimony.

[fol. 360] Mr. Jones: I think the witness' evasion of my questions justifies it.

Mr. Keating: I do not agree with that.

A. (Interrupting.) I am not evading.

The Court: No, Mr. Keating, I will allow it; I think it is a just criticism of the witness.

Q. Now, isn't it a fact, that every time you come to Hull, that the marine superintendent and the engineer superintendent come aboard your ship and inspect your ship?

A. I could not say.

By the Court:

Q. Captain, cannot you enlighten us a little on the practice? In sitting here, in this Admiralty Part, month after month, I have found, and I have gotten the impression, that that was the general practice in all steamship companies, to have someone come on board the steamship at the end of every voyage. It has been testified to before me in many cases. Is yours a different practice than that?

A. The assistant superintendent comes on board the ship every time.

Q. Somebody in authority?

A. Yes, certainly.

Q. Someone comes with authority to see and inspect the ship, doesn't he?

A. Yes, sir; certainly.

Q. And you say it is always the assistant superintendent?

A. No; sometimes the superintendent.

Q. The superintendent or assistant to the superintendent?

A. That is so, sir.

Q. Invariably comes aboard and makes a more or less thorough inspection of the ship altogether?

A. Yes, they do.

[fol. 361] By Mr. Jones:

Q. And it would be obvious to him that you had carried coal in these 'tweendeck compartments?

A. They would know that. You are speaking now of the June voyage?

Q. Yes.

A. Yes.

Q. And it is obvious, too, captain, from this stowage plan, that the only place that you could have carried that coal was in No. 3 'tweendecks and No. 3 shelter deck and not placed the coal on top of the steel in No. 2 shelter deck?

A. I don't know exactly where I would place it; say in No. 2 shelter deck; there might have been some room; and there might have been room in there apart from the steel plates.

Q. I tell you, captain, that in No. 2 shelter deck is about 60 feet long. That that is about its dimensions. Under those circumstances, the steel plates would take up the main part of No. 2 shelter deck, considering the length of it; isn't that so?

A. I don't know how they are going to get the 60-foot plates down the hatchway.

The Court: Are you sure that those plates are 60 feet? Isn't that the indication on the drawing, that it is 60 feet?

Mr. Jones: All I am going by is the plan, your Honor; it says there, as your Honor will see there, 60 with a dash, which usually indicates 60 feet.

A. (Interrupting.) It is a physical impossibility to get the plates down there.

Q. Captain, did you ever hear of any ship being loaded other than filling up the spaces in the lower part of the ship before filling the spaces in the top part of the ship?

A. No.

[fol. 362] Q. Nobody else ever did?

A. No.

Q. And you would have put this coal in the 'tweendeck space rather than put it up higher in No. 2?

A. But the lower part of the ship was full.

Q. And everybody knew you were going to put the coal in that place, didn't they?

A. I don't know what you mean by "everybody". The engineer and the chief officer all knew it.

Q. Mr. Sanderson knew it too, didn't he?

A. I don't know whether Mr. Sanderson did or not.

Q. When you were presented with the plan, he must have known about it; isn't that so?

A. I arranged the plan, presumably.

Q. You drew up this plan?

A. I arranged the material.

Q. You reported it to Mr. Sanderson in his office, the plan was prepared by Mr. Sanderson's office?

A. After the cargo was in.

Q. Before you sailed?

A. Before we sailed, I suppose so.

By the Court:

Q. Who determined where the cargo was to be placed?

A. Me, sir.

Q. Sanderson had nothing to do about determining about what part of the boat should carry any particular material, do you say?

A. It was left entirely to me where to put the cargo.

By Mr. Jones:

Q. He did not leave it to you as to whether you were to carry this grain or to carry the coal, did he?

A. I mean to say, he gives me a list of the cargo; he knows the capacity of the ship, and it is left to me where to place the cargo.

[fol. 363] Q. And he told you you had to carry the grain?

A. He did not; I had the grain already.

Q. You knew you had to carry it in your lower hold, and he knew it too, didn't he?

A. That is the place were they put grain.

Q. That is the place that they carry grain?

A. Yes, sir.

Q. Everybody knows that, don't they?

A. Certainly.

The Court: I think we might shorten this: Do you contend that the owners are not responsible for placing the coal in these holds.

Mr. Keating: Absolutely; that is entirely up to the officers of the ship. Our contention is that it is a good place, and that the officers selected a good place to put the coal, and that the shipowners had nothing to do with it at all.

Mr. Jones: Our contention is obviously, that when they ordered this additional coal, that the owners must have known from their own plan of the ship, that the owners must have known that they would put it there.

The Court: That was made up for cargo use, was it?
Mr. Keating: Yes.

A. (Interrupting.) It is physically impossible to get these 60-foot plates down the hatch into a 60-foot deck, or any other number of plates of that length in there; I am sure there was no 60-foot plates there.

Q. Very well; you have told us that several times already. [fol. 364] A. Still you insist on it that there was these 60-foot plates there.

Q. You report, do you not, to your office here, the quantity of coal you have when you arrive?

A. Yes, I believe I did.

Q. And you report the bunkers and the places in the ship where the coal is, don't you?

A. No, sir.

Q. Don't you report, or your chief engineer report, the quantity of coal that is on hand, the bunkers, when you arrive?

A. No, sir.

Q. Don't you have forms which you make out stating the exact quantity that you have got in each bunker?

A. No.

Q. You have nothing to do with employing the stevedore?

A. No.

Q. And the stevedore does all the stowing of the cargo?

A. Under my directions and my instructions, under my supervision and the chief officer.

Q. Isn't it a fact that when you arrived here, you found this cargo all booked for your vessel?

A. That I could not say.

Q. You don't remember?

A. I don't remember.

Q. But you had nothing to do with the booking of it?

A. I did not book the cargo.

Q. Did you have anything to do with the purchasing of the coal that was put in these two compartments?

A. No, sir.

Q. That is, the shelter deck and the 'tweendeck.

A. No.

Q. The coal was purchased by Sanderson?

A. I don't know if by Sanderson & Son or the Ellerman's Wilson.

Q. Purchased by a representative of the Ellerman's Wilson Line; that is right, isn't it?

A. I don't know.

[fol. 365] Q. At any rate, you had nothing to do with the purchase of it?

A. No.

Q. Who delivered the coal to you?

A. Well, they gave me lighters.

Q. Did you know where they came from?

A. No.

Q. Do you know by whom it was brought to you?

A. I ordered it to be sent down alongside the ship.

Q. Mr. Sanderson told you the coal had been ordered, didn't he?

A. I told Mr. Sanderson to order it.

Q. You told Mr. Sanderson to order it?

A. Yes, after I got orders from Hull to take it.

Q. From whom did you get the orders—direct from Hull by cable?

A. No; from Mr. Sanderson.

Q. Do you mean to say that you told Mr. Sanderson to buy this coal?

A. No; I told him to order it alongside.

Q. As a matter of fact, what happened was that Mr. Sanderson told you to take the coal, didn't he?

A. He told me he received instructions from Hull.

Q. He told you you were to take the coal?

A. To take the coal; and it was passed on to me.

Q. Who actually loaded the coal on board?

A. The coal gang.

Q. Did you employ the stevedores who did the loading?

A. No.

Q. Who employed them?

A. I presume it is Mr. Sanderson employed these men.

Q. Now, as I understood you, this coal was hoisted from lighters in buckets? A. Yes.

Q. And the buckets were emptied into barrows?

A. Yes.

[fol. 366] Q. And the barrows were wheeled across the deck?

A. Yes.

Q. And dumped over the hatch coaming into the hatch-

way and the coal fell over the weather deck down to the 'tweendecks?

A. Yes, as near as I can recollect.

Q. Was there any trimming done to the coal after it came down to the 'tween decks?

A. There would be.

Q. Who did that?

A. Trimmers.

Q. Stevedores?

A. Trimmers.

Q. Trimmers, employed by whom?

A. By Mr. Sanderson.

Q. I show you Exhibit No. 16, and ask you if this book was ever called to your attention?

A. I have never seen that book.

Q. No one has ever called that book to your attention, has there?

A. No.

Q. I show you Exhibit No. 17 for Identification, and ask you if that pamphlet has ever been called to your attention.

A. Well, I have seen something similar to it.

Q. You have seen something similar to that?

A. Yes.

Q. You know it is an official publication of the Board of Trade, don't you, by looking at it?

Mr. Keating: I object to that your Honor; how can the man tell that?

A. May I look at it again? I see it is by the Board of Trade.

The Court: Sustained.

Mr. Jones: Exception.

[fol. 367] Q. I ask you whether or not the following circular of the Board of Trade was ever called to your attention by your owners:

"Masters and officers of ships loading coal at ports in the United Kingdom, are warned that accidents have frequently occurred through the ignition of coal gas. All hatchways should therefore be left open, both before and for some time after cargo is shipped, and as the gas may find its way into forecastles and cabins, owing to the bulk-

head not being gas-tight, a free circulation of air should be provided for in holds and other spaces below deck. In order to secure adequate surface ventilation, at least two ventilators should be provided for each hold or compartment in which coal is stowed; these ventilators should be of wrought iron or wrought steel, fitted with cowls and placed at opposite ends of the compartment, or as far apart as circumstances will permit. In the event of adequate ventilation not being provided, the vessel will be liable to be detained. Any further information required on the subject of ventilation, may be obtained on application to the offices of the Board of Trade."

Was that ever called to your attention?

A. I know the ship is constructed according to Lloyd's rules.

Q. I didn't ask you that.

A. No, it was not.

Q. This was never called to your attention?

A. No.

Q. You have said that Exhibit No. 17 was never called [fol. 368] to your attention?

A. It never was called to my attention.

Q. Then was the following notice ever called to your attention?

"In the official notices for 1912, issued in Great Britain, Notice 11 coal cargoes, was as follows: The attention of the master is directed to the following recommendations of the Royal Commission appointed to inquire into the causes of spontaneous combustion of coal on board ship; that the breakage of coal in its transport from the pit to the ship's hold, the shipment of pyritic coal in a wet condition, and especially ventilation through the body of coal cargoes, conduce to spontaneous combustion, even though the coal may not be unfit for conveyance on long voyages; that when coal is being carried on long voyages, the temperatures in the various portion of the cargo should be tested periodically by thermometers and registered in the log; that with a view to guarding against explosion, free and continuous egress to the open air independently of the hatchways, should be provided for the explosive gases by means of a system of surface ventilation which would be

effective in all circumstances of weather; in the event of an inquiry into any casualty arising on board this ship from spontaneous combustion or explosion, neglect on the part of the master or officers of these recommendations, will be brought to the notice of the court. The master is also [fol. 369] warned that in the event of his vessel being found to be in a state dangerous to human life, either from through ventilation which is conductive to spontaneous combustion of the coal, or from not having sufficient surface ventilation to carry off explosive gas, he will render the ship liable to detention for unseaworthiness and himself and the owners liable for prosecution for taking a vessel to sea in an unseaworthy condition. Masters and owners of ships carrying coal are also warned that gas from the hold or 'tweendecks may find its way into the forecastle and cabins if the bulkheads are not gas-tight. Persons in charge of coal laden ships should bear in mind the dangers resulting therefrom the consequent impropriety of introducing naked lights in these places."

Was that circular called to your attention?

A. Or a similar one that came from or issued by the Board of Trade; it is a notice to mariners of those things. I cannot recall that one.

Q. You cannot recall that one?

A. I cannot recall that that especial one was; but others similar to that.

Mr. Keating: You mean similar ones were received?

The Witness: Notices to mariners.

Q. Did your owners ever call your attention to this?

A. I cannot say that they did; I do not recall it; but similar ones have been; I mean to say, about the dangers of coal and the ventilation of coal.

[fol. 370] Q. What days did you receive those?

A. I could not tell you.

Q. Did you take any precaution at all to prevent air going through this coal?

A. There is two ventilators on the deck.

Q. How does that prevent air going through the coal?

A. No air could go through the coal. It is stowed in what is called dust-tight bulkheads which is as near air-tight as possible to make it.

Q. You know a dust-tight bulkhead is not an air-tight bulkhead, isn't it?

A. It is as near air-tight as it is possible to make it.

Q. You know it is not air-tight, I didn't ask you the other question, you know it is not air-tight, don't you, Captain?

A. Well, I don't suppose any wooden bulkhead is perfectly air-tight; but what little air gets through that would not affect that.

Q. You don't know a thing about that, do you, whether it would or would not affect it?

A. I don't know anything much about coal; but I know that I know very little about coal.

Q. Can you recall any specific time when your owners called to your attention, the danger of carrying coal?

A. No.

Q. And what is to be guarded against in carrying coal?

A. No, because we never carried it, but just bunkers.

Q. Never carried it?

A. No.

Q. Do you know whether or not there is a gentleman named Mr. Thomas Nevins, who worked for your owners here in New York?

A. Never heard of him.

Q. Whom, if anybody, is the superintending engineer of your owners here in New York?

A. Haven't got one.

[fol. 371] Q. Who has charge of the physical condition of the ships of your owners here in New York?

A. I have.

Q. You have?

A. Yes.

Q. Do you know a gentleman named Capt. Isbester?

A. Yes.

Q. What is his job?

A. Just an official of the other lines.

Q. He had nothing to do with your ship?

A. Unless he is called in.

Q. Who calls him in?

A. If it is necessary I would get him to come down on board.

Q. If he has no connection with your owners, why do you call him in?

A. He is superintendent for the combine—he is one of the combines.

Q. As a matter of fact, was not he aboard your ship in August and June, 1926?

A. I cannot recall it.

Q. What do you mean by the "combine"?

A. I mean to say, there is the Ellerman's Wilson Line and there is the Ellerman Bouker Hull Line, and there is the City Line.

Q. You would say one management runs the whole outfit?

A. I think the Wilson Line is under a separate management; I don't know much about it.

Q. You made out a manifest before you sailed from New York?

A. No.

Q. Somebody had to make it out before you sailed.

A. Yes.

Q. Who made out the manifest?

A. I could not say.

Q. Made out by the office?

A. Made out by the office.

Q. Didn't you have to swear to it?

A. No.

Q. You didn't swear to it?

A. No.

[fol. 372] Q. In order to get clearance, didn't you know and don't you know, that your manifest had to be filed?

A. I suppose so; yes.

Q. You had to get clearance yourself, didn't you?

A. No, I go with someone appointed from the office to the customs house to get clearance.

Q. Don't you have to get clearance under your own name as master of the ship?

A. Yes.

Q. You have to file the manifest to get the clearance?

A. I don't know what they file.

Q. Now, Captain, don't you know as the master of the ship, that you have to go and make an oath?

A. That is so.

Q. And have to make an oath as to the correctness of your manifest?

A. That is correct.

Q. What did you mean by telling me that you didn't know that the manifest was filed? Do you mean to say that you make an oath to a manifest as being correct when you didn't know it is so?

A. I know the manifest is made up and has to be correct; you've got to trust to one of the offices to do that, because I cannot identify every item on the manifest.

Q. The manifest is made up by the office and you go and swear to it because the office says, "Captain, here is your manifest"?

A. No, I would not do that way.

Q. What do you do?

A. I got to swear to the manifest, that it is correct.

Q. Without reading it over?

A. I have seen some of the things.

By the Court:

Q. Whom do you say makes it out—the office, or one of the officers? I am not sure I heard you right?

A. The office.

[fol. 373] Q. The office?

A. Yes.

Q. That is, Sanderson's office?

A. Sanderson's office.

By Mr. Jones:

Q. Then you swear to it without reading it over?

A. I read it over—I mean to say, I look at it.

Q. What do you mean to say, by telling me just now, that you didn't know anything about a manifest?

A. I didn't say I didn't know anything about it.

Q. I understood you to say so.

A. I didn't mean that.

Q. You didn't mean a number of things that you testified to here today, did you, Captain? You didn't mean that you had to stow the coal between No. 3 'tweendecks because that is the only place you had to stow it?

A. I didn't say I had to stow it.

Q. You knew that is a fact, though?

A. It is not the fact; I have told you there is other places to stow it.

Q. Put it on top of these steel plates?

A. There is plenty of room apart from putting it on top of the steel plates.

Q. Where else would you put it?

A. Put it in the shelter decks.

Q. Where the steel plates were?

A. Yes, perhaps by the side of where the steel plates were.

Q. In the shelter deck, according to the stowage plan, shows——

A. You say 60 feet long, and you cannot get a 60-foot long plate down there.

Q. Don't you know 850 tons of bunkers is shown on your manifest? Were not they shown as being bunkers, on your manifest?

A. 850 tons?

Q. Yes.

A. In the shelter deck.

[fol. 374] Q. You have 850 tons of coal?

A. Yes.

Q. Which you carried pursuant to orders from your owners?

A. Yes.

Q. You had to make some notation in your manifest respecting that 850 tons of coal, didn't you?

A. Yes.

Q. What notation did you make in your manifest respecting the 850 tons of coal?

A. I cannot recollect.

Q. You cannot?

A. No.

Mr. Jones: Have you got the manifest?

Mr. Keating: No; but we will get it for you if you want it; do you want it?

Mr Jones: I should.

Mr. Keating: It is filed in the custom house.

Mr. Jones: And I will send a subpoena down there for it.

(Adjourned to Monday, November 11, 1929 at 10:30 o'clock A. M.)

New York, November 11, 1929.

(Met pursuant to adjournment at 10:30 A. M., present as before.)

Mr. Keating: May I proceed, sir?

The Court: Yes, certainly.

JOHN OXTOBY, being duly sworn and examined as a witness for respondent, testifies:

Direct examination.

By Mr. Keating:

Q. Mr. Oxtoby, do you hold a chief engineer's license?

A. Yes, sir.

[fol. 375] Q. How long have you held that license?

A. Since 1902.

Q. And before that did you hold any other license?

A. Yes, sir, second engineer's license.

Q. How many years have you been going to sea as a chief engineer?

A. As chief engineer, 14 years.

Q. Although you held your license longer than that?

A. Yes sir.

Q. But your actual service has been 14 years?

A. From—yes, from 1915.

Q. And how many years going to sea as an engineer?

A. Well, since I was 21—33 or 34 years.

Q. You have practically served all your manhood as an engineer on ships?

A. Yes, sir.

Q. Coal burners?

A. All coal burners.

Q. And from whom did you get your chief engineer's license?

A. Board of Trade.

Q. British Board of Trade?

A. British Board of Trade.

Q. How many years have you been wholly employed by the Ellerman's Wilson Line, Ltd.?

A. About 29 years, sir.

Q. You are still in their employ?

A. Yes, sir.

Q. Are you married?

A. Yes, sir.

Q. Where is your home?

A. 53 Claremont Avenue, Beverly Road, Hull.

Q. Have you any children?

A. Yes—six.

Q. When did you join the "Galileo"?

A. November—on or about November, 1924.

Q. 1924 or 1925?

A. 1924.

Q. 1924?

A. 1924.

Q. And how long did you serve on her?

A. That is since I was chief, I was appointed chief over here in 1924, but I was second engineer of her before that.

[fol. 376] Q. When did you join her as second engineer?

A. 1908.

Q. How long, all told, have you served on the "Galileo"?

A. About 9 years altogether.

Q. Are you sure that it was November, 1924, when you joined the "Galileo" as chief engineer?

A. Yes, yes, yes.

Q. Where was she at that time?

A. She was in Hull.

Q. Had she been undergoing any repairs, or anything of that sort?

A. Not in 1924, no.

Q. Where did she go during the year 1924?

A. She went on her usual runs.

Q. Which were they?

A. Hull, Boston, New York, Newcastle; they varied; that was about her usual run.

Q. Her usual run was New York, Boston and Hull, Newcastle, is that right?

A. Yes, sir.

Q. Now, prior to June, 1926, where used you to coal for the round, if you did coal for the round?

A. Well, either in Hull or in Newcastle.

Q. What is the capacity of your permanent bunkers?

A. 740 tons.

Q. Where did you carry, prior to June, 1926—where did you carry your surplus coal?

A. In the No. 3 lower hold.

Q. Was that the usual practice?

A. Coming out it is, yes.

Q. That is, if you were coming from Hull to New York you carried surplus coal in No. 3 lower hold?

A. No. 3 lower hold, yes.

Q. When you got to New York what was done with that coal?

A. Well, it was taken out of there and put in the permanent bunkers.

Q. And then you would sail back with that coal in your bunkers?

A. Yes, sir.

[fol. 377] Q. And go through the same process again, is that right?

A. Yes, sir.

Q. Sort of a circle?

A. Yes, sir.

Q. Now, in the Spring and Summer of 1926 was there any difficulty with coal in England?

A. Yes, sir, there was a coal strike on.

Q. And during that period were you able to get any coal in England?

A. No, no, no, not able to get any coal.

Q. Now, when you arrived here in June, I think it was the 21st of June, according to the libel, did you have any coal in No. 3 lower hold at that time?

A. No, no.

Q. Now, did you have on any surplus bunkers in New York on that trip?

A. On that trip, yes.

Q. Was that the first time you had done that?

A. The first time we had taken for the round, yes.

Q. Where did you put that extra coal?

A. In the No. 3 lower between decks and in the No. 3 shelter deck.

Q. And approximately how much did you put in each space?

A. No. 3 between deck about 350 to 360 ton.

Q. That approximately filled that space, did it?

A. Yes, sir.

Q. And how much did you put in the No. 3 shelter deck?

A. About the same quantity, similar to 350 tons.

Q. Has No. 3 shelter deck got a wooden bulkhead at the forward end?

A. A wooden bulkhead at the forward end, yes, sir.

Q. And what kind of a wooden bulkhead is that as related to the No. 1 in No. 3 shelter deck forward?

A. Well, practically the same, I mean it is a wooden bulkhead.

[fol. 378] Q. What kind of a bulkhead is there at the after end of No. 3 shelter deck?

A. Well, steel; a steel.

Q. In the way of the hatch?

A. In the way of the hatch, and wood at each side.

Q. How does that compare with the bulkhead in the deck below, that is, in the No. 3 between deck?

A. The same thing applies.

Q. Now, aft of the after bulkhead, that is, this steel bulkhead with wood in the wings in No. 3 shelter deck and No. 3 between decks, what do you carry?

A. Carry coal.

Q. Is that space immediately aft of those bulkheads part of the permanent bulkhead?

A. Part of the permanent bulkhead.

Mr. Jones: I move to strike it out.

The Court: I will let it stand.

Mr. Keating: I am sorry; Mr. Jones' point is well taken.

By the Court:

Q. The rear of the permanent bulkhead is a steel bulkhead, is it?

A. The rear of the bulkhead, yes, sir.

Q. Steel all the way across?

A. Yes, sir.

By Mr. Keating:

Q. In both the between decks and the shelter deck?

A. We are talking of the rear bulkhead are we?

Q. Yes.

A. In the shelter deck, no, sir.

By the Court:

Q. Your permanent bunkers don't go up to the shelter [fol. 379] deck, do they?

A. No, sir; no, they go just up to the shelter deck.

Q. But no part of the shelter deck space is included in the permanent bunkers?

A. No, sir.

By Mr. Keating:

Q. Now, Prior to June, 1926, had you ever carried coal in No. 3 shelter deck?

A. Oh, yes, we carried it in the No. 3 shelter deck.

Q. Had you any difficulty with the coal that you carried there?

A. None whatever.

By the Court:

Q. Why would you carry it in the shelter deck? You told me you carried the surplus in the lower hold of No. 3?

A. Yes, and so much of it in the shelter deck.

Q. It wouldn't fit in the lower hold?

A. No, and we carried it in the shelter deck.

By Mr. Keating:

Q. Prior to June, 1926, while you were aboard this steamer had you ever carried any coal in No. 3 between decks?

A. No, sir, no.

Q. When was the first time you put coal in No. 3 between decks?

A. On that occasion in June.

Q. Do you know what they put down in the lower hold in June, 1926, No. 3 lower hold?

A. Yes, grain.

By the Court:

Q. Why did you make the change from the lower hold to the between deck in June?

[fol. 380] A. Well, we just carried the coal coming out for stability of the ship, but we had grain in the No. 3 lower hold.

Q. You told me the practice had been to carry coal for the return trip in the No. 3 lower hold?

A. Yes sir.

Q. And then in June you changed that practice and started to carry coal in the No. 3 between decks?

A. Yes, sir.

Q. And put grain in the lower hold?

A. Yes, sir.

Q. I was interested to know why you changed.

A. I don't know any particular reason, sir, because the coal was just as handy for me in the No. 3 between decks as in the lower hold; in fact, it was handier for me to work with.

Q. What kind of bulkheads did you have in the lower hold?

A. Wood and steel.

Q. Wood forward?

A. Yes, sir.

Q. The same sort as in the between decks?

A. Yes, sir.

By Mr. Keating:

Q. You said something to his Honor about stability. Did you have any grain to carry from Hull to New York?

A. From Hull to New York.

Q. Yes.

A. No.

Q. Explain your statement about stability.

A. Well, coming out the ships are usually light as to their cargoes, and there was very little cargo, so the coal was usually put down there so the ship would be in trim coming out.

Q. You mean to say you would get some weight in the bottom?

A. Yes, sir.

Q. Now, leaving New York how did you get some weight [fol. 381] in the No. 3 lower hold?

A. By the grain.

Q. Now tell the Court how it was decided, and by whom, to put some of the coal in No. 3 between decks in June, 1926?

A. Well, the captain told me that we were going to carry coal, and suggested to me that the between decks would be the best place to put it, and I said yes.

Q. And that was the occasion of its being put in?

A. Yes, sir.

Q. Now, prior to putting any coal in No. 3 between decks was there anything else in there at that time, any commodity of any kind?

A. When we put the coal in?

Q. Yes.

A. No, sir.

Q. Before you left on the June trip did you make a memorandum in writing of the coal you had on board on arrival, the coal that was loaded while you were here, the coal shifted, the coal consumed, and the coal on board while leaving?

A. Yes, sir.

Q. I show you a memorandum and ask you if that is your signature attached to that memorandum?

A. Yes, sir, it is.

Mr. Keating: I ask that it be marked in evidence.

(It is marked Exhibit E of this date.)

Q. Mr. Oxtoby, will you look at Exhibit E and tell me which parts are in your handwriting and which parts are in someone else's handwriting?

A. Well, the figures are in my handwriting, but the other writing is of course made out by a clerk or somebody, I don't know who would make it out really.

[fol. 382] Q. That is the usual form that is given you, is it?

A. Yes sir.

Q. What do you do with this after you fill it out?

A. I hand it to the clerk usually just a bit before sailing.

Q. Just before you leave?

A. Yes, sir.

Q. Now, Exhibit E shows the coal situation on board your vessel as far as quantities are concerned when you left here in June, 1926?

A. Yes, sir.

Q. Now, after you left here in June, 1926, where did you go?

A. We went to Hull.

Q. And what did you do in Hull with respect to any coal?

A. Well, in the No. 3 between decks they had so much of it to move so that the grain could be worked from the lower hold.

Q. Do you know how much they took out?

A. Well, I sould say about 160 tons.

Q. Now, what did they take out of the shelter deck? Did they take some out of there too, No. 3 shelter deck?

A. No, they didn't take any out of there.

Q. On the way over to Hull did you use any of that coal?

A. Yes, I used as much as I could get away with; I think we used 30 or 40 ton over.

Q. And where did that come from?

A. Out of No. 3 between decks.

Q. Now, how did you get down through the grain to the coal that was in No. 3 shelter deck or hold? Did you take any out of there?

A. Oh, yes, yes.

Q. How much did you take out of the shelter deck?

A. No, no, that wasn't necessary, out of the shelter deck, that wasn't necessary.

Q. You didn't take any out?

A. No.

[fol. 383] Q. How did you get down through the grain in No. 3 shelter deck to get coal in the hold?

A. We must have worked that coal away ourselves to get at the hatch on the passage home.

Q. So some sufficient coal came out of No. 3 between decks and No. 3 shelter decks to get at the grain?

A. Yes, sir.

Q. That was the only way to get at the grain, wasn't it?

A. That is right, sir.

Q. Did you take any coal in Hull when you finished what I call the June trip?

A. No, we did not.

Q. Did you do any shifting of coal in Hull?

A. No, there was only that bit moved that I say they had to clear that hatch, that was the only movement of the coal.

Q. Now, you came back to New York, I think it has been testified that you arrived here on August 17, 1926. Now, at that time was there any coal left in No. 3 shelter deck?

A. Yes, sir, there was some left in the shelter deck.

Q. How much, do you know?

A. About 100 tons.

Q. And was there some coal left in No. 3 between decks?

A. Yes, sir.

Q. Do you know about how much?

A. About 160.

Q. Now, on the voyage out, which ended here on August 17, 1926, did you go in either of those places, that is, No. 3 between decks and No. 3 shelter deck?

A. Yes, sir.

Q. Which one did you go in?

A. I went in both.

Q. What for?

A. To see the quality of the coal and to see the conditions and to see how much coal I wanted.

[fol. 384] Q. Did you use any of that coal out of either space on the voyage from Hull to New York, ending here in August?

A. No.

Q. How many times over were you in those spaces, No. 3 between decks and No. 3 shelter deck?

A. Well, it is difficult to recollect all this time ago but I was certainly down there on three or four occasions.

Q. What did you do when you went in those spaces?

A. Felt the coal to see that it was all in order.

Q. Did you go into any of the other bunker spaces on the ship?

A. Always; that is my regular duty, go around, whatever coal there is.

Q. Why do you go in there to look at the coal?

A. To see the condition of it.

Q. What condition do you mean, whether it is still coal?

A. No, whether it is in good condition or whether it is heating, or anything of that sort.

Q. Has the chief engineer got any regular duty in connection with that?

A. Yes, sir.

Q. It was part of his job, was it?

A. Yes, sir.

Q. Were you expecting to take coal here in New York in August for the round voyage?

A. No.

Q. Why not? Was the coal strike over?

A. No, because we were going to lay up that voyage to fix up the refrigerating apparatus.

Q. Now, did you take extra coal here in August, 1926?

A. Yes, sir.

Q. How did the matter come to your attention that you were going to take extra coal?

A. The master told me.

Q. What did he say?

A. He told me we were going to take extra coal here for our other ships.

[fol. 385] Q. Now, following that conversation, what did you do, if anything, about taking on extra coal? Did you do anything?

A. I looked at my space in No. 3 between decks and shelter deck and told them what we could take in there.

Q. Did you estimate how much was there?

A. Beg pardon?

Q. (Repeated.) Did you estimate how much was there?

A. Yes, sir, and how much we could take.

Q. When did you first go into those spaces in New York with reference to the time you loaded the new coal?

A. On the previous evening to when they were going to start the coal.

Q. About what time was that?

A. Well, it would be after the grain was finished in the lower hold, I suppose between 4 and 5 o'clock on that day.

Q. Now, your visit was the afternoon before the day they started to load the new coal?

A. Yes, sir.

Q. Did you go into No. 3 shelter deck at that time?

A. Yes, sir.

Q. Did you go into No. 3 between deck?

A Yes, sir.

Q. What did you do and what did you see at that time?

A. I felt the coal and to my mind it was quite all right to put the new supply on it.

Q. Did you put your hand on it?

A. Yes, sir.

Q. How did it feel?

A. It felt just about the same as it would feel for that time of year, I thought.

Q. Now designate the coal as cool, warm or hot; which would you say it was?

A. I should say it was warm.

[fol. 386] By the Court:

Q. Was it warmer than the parts of the ship?

A. No, sir, I don't think so. Of course, it was in August, that time of year, and everything is a bit warm, though I didn't think it was any more than normal.

Q. Do you mean about the temperature of the air also?

A. Well, it may have felt a little warmer than that, sir, but nothing dangerous.

Mr. Jones: I move to strike out the latter part of his answer.

The Court: I will allow it to stand, with exception.

Q. What parts did you feel?

A. All round the surface coal, sir, all round the forward and the two sides.

Q. All on the same level with your shoulder, about?

A. No, in the middle way, and I had a good feel all over it.

By Mr. Keating:

Q. Why did you feel the coal, chief?

A. Well, it was my duty to do so.

Q. And what was your purpose in putting your hand on the coal?

A. To make sure that it would be quite all right to put the other coal on top of it.

Q. Is it part of your duty to inspect the coal?

A. Yes.

Q. Is it part of your duty to make a proper inspection?

A. Yes, sir.

Q. Now, when you left here in August, 1928—

A. 1926, sir.

[fol. 387] Q. I mean 1926; did you make any report similar to the ones that you made of the June voyage, which is marked Exhibit E? (Showing witness paper.)

A. Yes, that is a similar report I made on that voyage.

Q. This is the August voyage on which you were lost?

A. Yes, sir.

Mr. Keating: I ask that it be marked in evidence.

(It is marked Exhibit F of this date.)

By the Court:

Q. You didn't do other than just feel the surface of the coal?

A. I put my hand into it.
Q. Put your hand into it?
A. Yes, sir.
Q. How far in?
A Well, to beyond the wrist.
Q. What was it, powdered, finely divided coal?
A. Usually the American coal is very fine.
Q. How did you get your hand in?
A. Well, by working it; you could work your hand in the coal.
Q. Did it feel warmer inside than on the surface?
A. No, not to me, sir. Well, I might qualify that and say that it would be a little warmer than it was on the surface; nothing detrimental to that, though.
Q. I understand you to say that the coal felt warmer than the air?
A. Yes, sir.
Q. Do you mean that it also felt warmer than, well, the woodwork or the iron work on the ship down in the between deck? Just consider the temporary bunker, Did you happen to feel that at the same time?
A. The wood or anything like that?
[fol. 388] Q. Yes.
A. No, sir, I didn't, no. It may have felt slightly warmer than that.

By Mr. Keating:

Q. Mr. Oxtoby, tell me which part of Exhibit F is in your handwriting.
A. The figures, and also the signature.
Q. The remainder is the writing of a clerk, is it?
A Yes, sir.
Q. And what did you do with Exhibit F when you filled it out?
A. Handed it back to the clerk.
Q. One of the agent's clerks?
A. Yes, sir.
Q. On the pier?
A. Yes, sir.
Q. How long before sailing?
A. Just a few hours, generally the last day it comes.
Q. That is the last thing you do?
A. Yes, sir.

Q. You have to put on it, do you not, the amount of coal consumed in port?

A. Yes; I can't make it up generally until the last thing, for you have to make it up with the quantity of coal consumed in port.

Q. Did you see anyone else down there in No. 3 between decks while you were there in August?

A. Yes, sir.

Q. Who else did you see?

A. The chief officer was down there.

Q. What was he doing?

A. Looking after his hatch to see that everything was in good order.

Q. That is the hatch over the grain?

A. Yes, sir.

Q. Was he physically doing some work himself?

A. No, I can't say that he was physically doing it, but he was looking over to see that it was battened down and all in good order.

Q. Did you see anyone else there?

A. Yes, the master came down too.

[fol. 389] Q. What was he doing?

A. He was having a look at his part of the place to see that the mate had carried out his part battening all the holds to keep the coal dust away, and so on.

Q. And whose duty was it on the "Galileo" to look after the coal?

A. Mine.

Q. Was there anybody else on board had anything to do with it?

A. No.

Q. Whose duty on the "Galileo" was it to determine whether the coal was cool or warm or hot or safe or dangerous?

A. Mine.

Q. Was it anybody else's duty?

A. No.

Q. Did the owners have a Marine Superintendent in New York?

A. Not to my knowledge.

Q. Have they got a Superintendent Engineer in New York?

A. Not to my knowledge.

Q. Did you ever meet him?

A. No.

Q. Anybody of that character on the ship in August?

A. No.

Q. Anybody fom the shore, the agent or anybody of that character, give you any orders about that coal in August, 1926?

A. No.

Q. Before you put any coal in No. 3 between decks in August how much coal did you say was left from the previous trip?

A. About 160 tons.

Q. And when had that 160 been put in there?

A. In June previous, the June voyage.

Q. That was on June 30th, wasn't it?

A. Yes, sir.

Q. Will you describe to his Honor the coal pile, the form that that 160 tons took?

A. Yes, say it was a space like this room, there will be coal going down the sides and also at the forward end, and the hatch would be here (indicating), probably where the desk is, and the coal would run down to the hatch about 4 feet clear of the hatch.

[fol. 390] Q. That is the forward end of the hatch?

A. Yes, sir.

Q. What is the coal against forward of the hatch?

A. Against the wood bulkhead.

Q. And how high up—how far down did the pile come that was against the wooden bulkhead from the next deck?

A. I should say 3 or 4 feet.

Q. With reference to your inspection of the coal did you go in that space again yourself before they loaded the coal?

A. No, not that day.

Q. Prior to loading coal in No. 3 between decks what was the last time you personally went into No. 3 between decks?

A. On the evening previous.

Q. Previous to what?

A. Previous to the day we started loading.

Q. You started loading the next morning?

A. Yes, sir.

Q. I think the logbook shows it was August 25th.
A. Am I right about that, Mr. Jones?

Mr. Jones: I think so.

Q. I think it shows August 25th. Were you there while the coal was being loaded?
A. Yes, sir.
Q. Where were you?
A. On deck.
Q. Which deck?
A. On the main deck, where we were taking the coal in.
Q. The weather deck?
A. Yes, sir.
Q. Where did they take the coal from?
A. From the lighter.
Q. Where was the lighter?
A. Alongside of the ship.
Q. And how did they get it out of the lighter into the hold?
A. By buckets.
[fol. 391] Q. Well, how did they get it in the buckets? Just describe the operation from the time——
A. Well, there would be men on the lighter filling these buckets, and when each bucket was filled it would be swung over and the contents of the bucket put into a wheelbarrow and wheeled over the hatch and dumped into the hatch.
Q. Before that operation took place had they trimmed any of what they called the old coal?
A. No, they hadn't trimmed any.
Q. Who was in charge of the coal trimmers, do you know?
A. Well, I don't know the man by name, but he was the man that had been there on several—well, pretty well all the time I have been chief, the same man.
Q. He was the foreman of the coal trimmers?
A. He was the foreman of the coal trimmers, yes, sir.
Q. How long did they continue to dump this coal into the No. 3 between decks before anything happened?
A. Well, they would get it up into a pile and send the trimmers in.
Q. Did you see the trimmers go down?
A. Yes, sir.
Q. What does a trimmer do?

A. He removes the coal from the heap and throws it as far back as he can until they fill the space up.

Q. The trimmers were down there that morning, were they?

A. They were down there, yes, sir.

Q. And the process of trimming that new coal would put the new coal where, with reference to the old coal pile?

A. Well, it would fill the space up which had been worked out and it would come on to the old coal, of course.

Q. Would there be any new coal in the after end of the No. 3 between decks?

A. Oh, yes, there would be new coal there.

[fol. 392] Q. Would there be any new coal in the forward end?

A. Not right forward, no.

Q. That would be on account of the shape of the pile?

A. Yes, sir, the slant, you see, would come down and the coal would pass that.

Q. Mr. Oxtoby, something happened that morning, didn't it, with respect to the condition of the coal?

A. Well, the foreman came to me——

Q. What foreman are you talking about?

A. The foreman of the coal trimmers, and he said that the coal was hot.

Q. Is that all he said?

A. No, he said it was burning the men's boots.

By the Court:

Q. Which coal was that?

A. He said the coal.

By Mr. Keating:

Q. Did you ask him which coal, or do you recall?

A. I do not recall.

Q. What did you say to him?

Mr. Jones: Objected to, what this witness said to the foreman.

Mr. Keating: I think it is very important that your Honor should have this story.

The Court: I think it is part of the res gestæ and admissible. I overrule the objection, with exception.

Q. What did you say, Mr. Oxtoby?

A. Well, I said, as near as I can recollect, I said the coal would be all right and carry on with it.

Q. How long did that conversation take?

A. Not over two minutes.

[fol. 393] Q. Did you go down in the No. 3 between decks then?

A. Not just at that time, no.

Q. Did you go down later?

A. Yes.

Q. Did you report at the time it happened your conversation with the foreman of the coal trimmers to the captain?

A. No, sir.

Q. To whom did you report it?

A. Nobody.

Q. Why not?

A. Because I thought the coal was quite all right. I had no reason to report to anybody.

Q. When did you expect that all the coal in No. 3 between decks would come out?

A. In about 15 days' time.

Q. You took a chance, didn't you, then?

A. I took a chance—a chance in my opinion the coal was all right and it was quite all right to go home with.

Q. Now, Mr. Oxtoby, do you make a report in writing at the end of each voyage in Hull?

A. A report goes in every voyage.

Q. For each voyage?

A. For each voyage.

Q. Made out by you?

A. Made out by myself.

Q. And to whom does that report go?

A. To the Superintending Engineer.

Q. Who was that?

A. Mr. Brackenbury.

Q. And that is done for each voyage?

A. That is done for each voyage.

Q. Did you hand in a report for the June voyage?

A. Yes, sir.

Mr. Keating: Now, if the Court please, those reports are arriving tomorrow on the "Majestic", and I will furnish them to Mr. Jones. I am sorry they are not here now, but

the chief will be here and Mr. Jones will have an opportunity to see them and question this witness about them.

The Court: All right.

[fol. 394] Q. Did you see Mr. Brackenbury on the ship following the June voyage in Hull?

A. Yes, sir.

Q. Was he there several times?

A. He was there several times, yes, sir.

Q. Do you remember what the occasion was of his coming aboard?

A. He was getting plans for the refrigerating repairs that I am talking about.

Q. He was there a good deal?

A. Oh, yes, he was there on two or three occasions.

Q. Now, Mr. Oxtoby, who is it in the company, the Ellerman's Wilson Line, this English corporation, who is it to whom you, as chief engineer, make your reports?

A. Mr. Brackenbury.

Q. Has he charge of all the engineers?

A. He has charge of all the engineers, of the engineering office.

Q. And you make a report to him how often?

A. At the end of every voyage.

Q. Do you make any report in New York?

A. Yes, I sometimes send a letter home to him from New York.

Q. Do you make a report to anybody in New York?

A. Oh, no.

Q. But you sometimes write him?

A. I think it is a duty of the engineers to write him, and the letter gets home and he knows what work we have had to do, see.

Q. Mr. Oxtoby, at any time while you were chief engineer of this vessel did you receive instructions in writing from Mr. Brackenbury about coal?

A. Yes——

Q. Don't tell us what it is. Have you got the papers that were given to you by Mr. Brackenbury?

A. No, I haven't.

Q. What became of them?

A. They were lost with the ship.

[fol. 395] Q. In New York Harbor?

A. Yes, sir.

Q. I show you, Mr. Oxtoby, a document, and ask you what that is? (Showing witness paper.)

A. That is a letter which I received, sir.

Q. You mean it is a copy of a letter?

A. It is a copy of a letter that I received.

Q. From Mr. Brackenbury?

A. From Mr. Brackenbury.

Q. How did you receive it, through the mail?

A. No, he gave it into my hand.

Q. When?

A. In Hull.

Q. When?

A. November, 1925.

Q. Do you recognize that as a copy?

A. Exactly.

Q. The original you say—what happened to it?

A. That was lost with the ship.

Q. Did you lose anything else?

A. My books and my clothes, everything, practically.

Mr. Keating: I ask that it be marked in evidence.

(It is marked Exhibit G of this date.)

Q. Did you read these instructions?

A. Absolutely, yes.

Q. You had them on board at the time the "Galileo" was lost?

A. Yes, sir.

Q. I call your attention, Mr. Oxtoby, to the concluding paragraph. First of all, this is dated October 19, 1925. "At the end of each year and each succeeding year please send in a statement as to the longest time any coal has been on board at the time of loading and also the amount;" did you do that?

A. No, I didn't do that.

Q. Why not?

A. Because soon after receiving that letter we went up to [fol. 396] Newcastle and we went into the drydock there, and the bunkers were thoroughly repaired and painted and all the coal was moved out of them.

Q. When did that operation finish?

A. That finished in December of the same year, 1925.

Q. And when did you leave on your first trip after those repairs?

A. I think the middle of December that year, after completing those repairs.

Q. And why didn't you send a report in compliance with that?

A. Because I knew that the officer knew, and Mr. Brackenbury knew, that everything had been cleaned out of the bunkers.

Q. Was everything cleaned out of the ship then?

A. Yes, sir.

Q. What did they do?

A. They repaired them where required and painted them up.

Q. And did other repairs to the ship?

A. And did other repairs to the ship, yes, sir.

By the Court:

Q. In New York in August, 1926, was any of the new supply of coal put into the permanent bunkers?

A. Oh, yes, sir; yes, sir.

By Mr. Keating:

Q. Do you know how much coal was loaded in the permanent bunkers here in New York in August, 1926, approximately?

A. Well, if you would give me a little piece of paper I could soon make it out.

(Witness is handed a piece of paper.)

Q. Do you want these exhibits too?

A. No, sir. I think there would be about 470 tons go into the permanent bunkers.

[fol. 397] Q. In August, 1926?

A. Yes, sir.

Q. Was there any other part of the ship, in August, 1926, that you could have removed the 160 tons that remained in the No. 3 between decks to?

A. Was there any other place in the ship?

Q. Yes.

A. Oh, yes.

Q. Where could you have put it?

A. In the shelter deck.
Q. What shelter deck?
A. No. 2 shelter deck.
Q. And where else could you have put it?
A. Well, I don't know; I have nothing to do with cargo or anything like that, but I know that place was clear of any cargo.
Q. Was there anything to stop you putting it in the permanent bunkers?
A. It wouldn't have gone in the permanent bunkers.
Q. I beg pardon?
A. All that coal wouldn't have gone into the permanent bunkers.
Q. I am talking about the old coal.
A. Oh, I beg your pardon; it could have gone into the permanent bunkers.
Q. Why didn't you put it there?
A. I didn't see any necessity for shifting it.
Q. There is a space on these reports for shifting, isn't there, Exhibits E and F?
A. Yes; if I had wanted the coal moved I could have got it moved.
Q. How would you have gone about that?
A. Seen the captain and told him I wanted labor to move the coal.
Q. Have you done that in the past?
A. Yes, yes.
Q. Who was there in New York either on the ship or anywheres else, in August, 1926, that had anything to say about [fol. 398] your bunkers besides you yourself?
A. Nobody, nobody.
Q. How much coal do you burn a day at sea?
A. About 42 ton.
Q. And how long is the ordinary passage from Hull to New York?
A. Well, you can average it, say 15 to 16 days.
Q. Each way?
A. Yes.
Q. Do you burn any coal in port?
A. Oh, yes.
Q. At each end?
A. Yes.
Q. How much coal does your steamer consume in a round voyage?

A. Well, about 1400; between 1400 and 1500 tons.

Q. Now, I observe that on leaving New York on July 2, 1926, according to Exhibit E, you had 1810 tons of bunker coal on board, is that right? (Showing witness paper.)

A. Oh, yes, that is right.

Q. Now, how long would it take you—how many voyages—to completely exhaust that coal if no other coal was taken on board?

A. Well, according to that you see it would take about a little over a voyage, wouldn't it, say burning 1500 ton, a little over a voyage.

Q. Now, when did you expect that all the bunkers in No. 3 between decks would be removed from that space?

A. In the No. 3 between decks?

Q. Yes.

A. We left on the 28th of August, I expected that they would be out before the end of September, in a fortnight's time.

By the Court:

Q. You didn't expect to burn that on the "Galileo", did you?

A. No, sir.

[fol. 399] Cross-examination.

By Mr. Jones:

Q. By whom are you employed now?

A. Beg pardon, sir?

Q. Who are you working for?

A. The Wilson Line.

Q. The same people you were working for at the time this fire occurred?

A. Yes, sir.

Q. When you got home did you tell anybody about this matter of what the stevedores told you here in New York?

A. No.

Q. Did you ever tell anybody before you told us today about it?

A. Beg pardon?

Q. Who was the first person you ever told about it?

A. About——

Q. About what the stevedores told you about their feet being hot when they got on this coal; who was the first person you ever mentioned that to?

A. Mr. Brackenbury.

Q. Who is he?

A. The superintending engineer.

Q. When did you mention it to him?

A. On the voyage over.

Q. What voyage over?

A. From England.

Q. Well, now—is that the same as that Mr. Brackenbury that you have told us about?

A. Yes, sir.

Q. You mentioned it to Mr. Brackenbury on the voyage over?

A. Yes, sir.

Q. Was he on the ship with you?

A. Yes, sir.

Q. What ship?

A. The "Sythia".

Q. The "Sythia"?

A. Yes, sir.

Q. It was shortly after this disaster that you told Mr. Brackenbury about it?

A. No, sir.

Q. I thought you just told me that?

Mr. Keating: No, he said on the voyage to America.

[fol. 400] Q. You never told him about it until this time?

A. No.

Q. You kept that as a deep secret in your own breast up to that time?

A. Yes, sir, I did.

Q. And you felt very guilty about it, didn't you?

A. No.

Q. You feel guilty about it now, don't you?

A. No.

Q. You don't feel that you were grossly negligent?

A. No.

Q. You don't think that had anything to do with the fire?

A. I didn't think that the coal would have got on fire.

Q. Do you think now that your paying no heed to the fact that the coal was hot had anything to do with the fire?

A. No; in my estimation the coal was perfectly all right.

Q. And you don't think today that that had anything to do with the fire, do you?

A. Well, I don't know.

Q. Mr. Brackenbury fired you when you told him about this, did he?

A. No.

Q. He has still got you in his employ?

A. Beg pardon?

Q. (Repeated.) He has still got you in his employ?

A. Yes.

Q. And you never mentioned that fact to a soul until you mentioned it to Mr. Brackenbury while you were coming over from England on the "Sythia" to come here to testify in this case?

A. No.

Q. Do you know that that would be an interesting subject to anybody interested in this case?

A. I hardly get that question.

Q. Did you know that that would be an interesting subject to anybody who has anything to do with this case?

A. Oh, yes, sir.

[fol. 401] Q. And notwithstanding that fact, you kept it secret for three years?

A. Yes, sir.

Q. And never mentioned it to a soul?

A. No.

Q. Didn't you know that it was your duty to report the facts to the people who had a right to know about them?

A. No, I didn't think it was my duty to report anything like that.

Q. What makes you think it was your duty to report it to Mr. Brackenbury on your way over her- to testify in this case?

A. Well, I should have to testify that Magarelli had spoken of it, so I must speak the truth.

Q. Didn't you know that Mr. Brackenbury would want to know what the facts were immediately the thing occurred?

A. Well, certainly, I should have told him.

Q. Why didn't you tell him?

A. Because I thought the coal was all right, and that it was perfectly all right for me to leave New York with it.

Q. Well, you knew that the stevedores didn't agree with you in that opinion?

A. The stevedores?

Q. Yes.

A. I only had two minutes' conversation with him; I didn't know whether he agreed with me or not.

Q. Who were the people that talked to you? Wasn't it trimmers or stevedores, or what?

A. The foreman of the stevedores.

Q. What was his name?

A. Magarelli.

Q. He came to you and told you that the coal was hot to his feet, and you brushed him aside and told him to go about his business, "I have no time to pay attention to you," is that what happened?

A. Yes, sir.

Q. And you kept that secret for a period of three years, [fol. 402] never told Mr. Brackenbury about it, and never told Mr. Keating about it, and never told anyone about it until you got on the steamer to come over here to testify in this case, and you made a confession to Mr. Brackenbury, is that what happened?

A. Yes, sir.

Q. Now, Mr. Oxtoby, I want to be quite certain that I fully understand your position. What you say today is that the heating of the coal didn't have anything to do with the fire?

A. I didn't know what caused the fire.

Q. You don't say anything one way or the other about it?

A. No, I don't know anything about what caused the fire.

Q. But you did think when you came over on the steamer that it was time for you to make a confession to Mr. Brackenbury about what this foreman told you?

A. Yes, I did.

Q. And you had never made any such confession until that time?

A. No.

Q. Now, you have spoken of this American coal as being fine. It has been stipulated in this case between Mr. Keating and myself that it was what we call run of the mine *ocal*?

A. Yes.

Q. You know run of the mine coal consists of fines and large lumps?

A. Yes.

Q. And this coal did consist of fines and large lumps?

A. Yes, there were some lumps.

Q. There were quite considerable large lumps?

A. No.

Q. Did you make any complaint about its being all fines?

A. No, never.

Q. And do you know when you get coal, as a chief engineer, that is all fines, you always make complaints about it, don't you?

A. No, sir.

Q. Do you know what causes heating of coal?

A. Well, the oxygen getting into it.

[fol. 403] Q. Do you know anything about the form of ventilation you should give to coal?

A. Yes.

Q. What?

A. You should give it surface ventilation.

Q. Give it surface ventilation?

A. Yes, sir.

Q. And you know that Lloyds requires that you should have two ventilators, one in the forward part of the compartment and one in the after part of the compartment, to properly ventilate coal, don't you?

A. I know there should be two ventilators.

Q. Was it never called to your attention by Mr. Brackenbury?

A. No.

Q. The Board of Trade circular issued in March, 1907, page 44 of Mr. Stoek's pamphlet, Exhibit 19 in this case, states—I am reading from page 44: "In order to secure adequate surface ventilation at least two ventilators should be provided for each hold or compartment in which coal is stowed. These ventilators should be of wrought iron or wrought steel fitted with cowls and placed at opposite ends of the compartment, or as far apart as circumstances will permit." Do you know of that requirement?

A. Yes, sir.

Q. Do you know anything about that regulation of the Board of Trade?

A. Yes, sir, I have read it.

Q. And you knew that the compartment in which you had to place this coal, which was part of the permanent bunkers of the ship, supplied you by the owners, had no such ventilation?

A. I said they had two ventilators; they had two ventilators.

Q. Are they at opposite ends of the compartment?

A. Opposite ends of the compartment?

Q. Yes.

A. No, they are not.

[fol. 404] Q. And you knew then that the permanent bunker space of this ship was not ventilated—you told Mr. Keating that this was a permanent bunker space?

A. No, sir; no, sir.

Q. I have it in my notes and I took it down very carefully and I will refer to the notes when they are written out. I will put that aside for the moment. We will come back to it later when we get the notes. Mr. Brackenbury knew that you used this compartment for the carriage of coal, didn't he, for he came aboard your ship when you were in Hull?

A. Yes.

Q. He went all over your ship?

A. Yes, sir.

Q. You made reports to him?

A. Yes, but not about the bunker coal.

Q. He saw the places where you carried the coal, didn't he?

A. Yes, sir.

Q. And this compartment did not have ventilation as required by the rules of the Board of Trade, did it?

A. Well, it had two ventilators, but they were not opposite to one another—they were opposite to each other.

Q. But they were not at opposite ends of the compartment, were they?

A. No.

By the Court:

Q. How far were they from the ends?

A. Well, I think 23 feet from the forward end.

Q. What do you mean by the end?

A. The forward bulkhead.

Q. How far were they from the side of the ship?

A. About 8 feet, as near as I can say, from the sides of the ship.

Mr. Keating: The ship was 50 feet wide, sir.

[fol. 405] The Court: Is it your contention that ends mean forward and aft?

Mr. Jones: Yes, sir.

The Court: Not forward of aft?

Mr. Jones: Yes, sir.

Mr. Keating: There is nothing in that, for the compartment was wider than it was long; it was 33 feet long by 50 feet wide, and Mr. Jones is reading from a pamphlet which has been supplemented by the pamphlet of the Board of Trade in 1917.

Mr. Jones: You refused to let me put it in.

Mr. Keating: We are prepared to let this go into evidence.

Mr. Jones: I offer Exhibit 17 for Identification in evidence.

(It is marked Exhibit 17 of this date.)

By Mr. Jones:

Q. The only thing that you ever had called to your attention with respect to the ventilation of coal is that there should be adequate surface ventilation?

A. Yes, sir.

Q. You never had anything else called to your attention?

A. That the air should not have to go through the coal.

Q. You had nothing whatever to do with the bulkhead in that ship?

A. No, sir, not making it.

Q. And you had nothing to do with whether it was air-tight or not—the chief mate, it is his business?

A. He said it was air-tight.

Q. But that is his business?

A. Yes, sir.

[fol. 406] Q. And you have nothing whatever to do with making them air-tight or not making them air-tight, or anything about it, have you?

A. No, I have not.

Q. But you do know that they should be made air-tight?

A. As air-tight as a bulkhead can possibly be made air-tight.

Q. And you know they should be absolutely air-tight, don't you?

A. They couldn't be.

Q. You can caulk a bulkhead?

A. Oh, yes, you could caulk a wood bulkhead, but I don't think you could make it absolutely air-tight.

Q. You don't know?

A. I don't think so.

Q. You don't know, do you?

A. No.

Q. Now, you said the wooden bulkhead in the shelter deck was practically the same as in the between decks; that is correct, isn't it?

A. Yes, sir.

Q. I show you Exhibit 7 and ask you if the planking shown on that exhibit isn't similar to the planking which was used in the between decks, on the bulkhead that was in the between decks?

A. Have you got the exhibit for the between deck bulkhead?

Q. All I have got is—it was burned away—there is only one plank left in one of these pictures, that is all I can show you.

A. Well, the planks were the same, as far as I can remember, the bulkheads were the same.

Q. The planks were similar to those as shown in that picture; I am showing you now Exhibit No. 7?

A. My recollection isn't clear as to what kind the bulkheads were, but I think they were the same.

Q. As shown in the picture No. 7?

A. Yes.

Q. Now I have written down here and I endeavored to take what you said, as nearly as I could get it, and I have [fol. 407] written here, the space aft of wooden bulkhead, part of the permanent bunkers of the ship—do you say that is not so?

The Court: You are mistaken about that, Mr. Jones, I am quite sure. If I am not mistaken, it was when I was asking him.

Mr. Jones: Yes, sir.

The Court: I got the impression from him that the permanent bunkers of the ship were to the rear of this space in the No. 3 between decks, that is my distinct impression; it confirmed my previous impression, and I didn't have the slightest idea that he intended to tell me that the No. 3 between decks was a part of the permanent bunker, that he was distinguishing between that space and that space in the rear.

Mr. Jones: As long as we are all agreed that that isn't so, I can't press it for the moment, but I was very much surprised when I made that note. But we want to look at his testimony and clear up that point, for I think that he agreed that the space in the between decks where the coal was placed was not a part of the permanent bunkers of the ship.

The Witness: No, it was not.

Q. You said you had been on this ship since 1908?

A. Yes, sir.

Q. Had that bulkhead been in that ship ever since you had been on the ship?

A. The after bulkhead had, yes, sir.

[fol. 408] Q. I mean the wooden bulkhead at the forward end of No. 3 between decks?

A. No, I can't tell you that.

Q. You don't know when it was put there?

A. No, I can't tell you.

Q. You don't know?

A. No.

Q. But it had been there for a long time?

A. Possibly, for cargo purposes, or something of that kind, I don't know.

Q. Now, you usually carried grain in your lower hold, didn't you?

A. Yes.

Q. That was the regular trade that your ship was in, to carry grain in these lower holds?

A. Yes, sir.

Q. So any bulkheads which you had in your lower holds were grain-tight?

A. Yes, sir.

Q. And built in accordance with the regulation for bulkheads for carrying grain?

A. Well, that isn't my part of the play, I don't know it.

Q. But you assume it?

A. I assume it.

Q. How do you discharge grain at Hull?

A. Well, it is taken over by bags, the bags are filled, and it is over on the top deck and dumped over the side.

Q. You have no suction elevators?

A. There are some, but it is not usually discharged by them.

Q. You have no lighters that come alongside that are equipped with suction apparatus?

A. No.

Q. In Hull you use the old-fashioned system of hoisting it out of the hold with bags or baskets or some other appliance?

A. Yes, sir.

Q. Do you hoist it out through the feeder or through the square of the hatch?

A. Well, you are asking me something really that I am [fol. 409] not conversant with, because I don't know exactly how it is discharged, but it comes out of the hold through the hatch, I take it.

Q. You have been on the ship for almost 8 years?

A. Yes.

Q. The ship carried grain probably every time she went out of this port, didn't she?

A. She carried a lot of grain.

Q. She was one of the grain carriers?

A. Yes.

Q. And there was not a voyage that she made during those years that she hadn't grain on her?

A. A few.

Q. It would be probably a few voyages that she didn't have grain?

A. Very few.

Q. And you never paid any attention to how they discharged that grain?

A. Only through the hatchways.

Q. Isn't it a fact that you used no coal out of the between decks or the shelter deck on any of your voyages either in June or in August, 1926?

A. We used the coal out of the shelter deck, so much of it, and so much out of the between decks in June, 1926.

Q. Which voyage?

A. After we left here in June.

Q. Now, will you just tell us what is the practical method you used in firing your ship? You have what you call side bunkers, haven't you?

A. Yes, sir.

Q. And you have stokers?

A. Yes, sir.

Q. And you have coal passers?

A. Yes, sir.

Q. Tell us what happens. Does the coal passer go through the bunker to get coal and pass it to the stoker, and the stoker passes it into the furnace?

A. Yes, sir.

Q. Where does he get it from?

A. At whatever hold we are working from.

[fol. 410] Q. If it is in the shelter deck does the coal passer go up to the shelter deck and fill a wheelbarrow full of coal and wheel it to some hatch and dump it down?

A. Yes.

Q. Notwithstanding he has coal in the side pocket just by his hand?

A. Whichever bunker we are working from he dumps it from that into the nearest place he can come to the stoke-hole.

Q. Don't you know that you work your side bunkers first?

A. No, not always.

Q. Didn't you on this June voyage?

A. Didn't we work the side bunkers?

Q. Yes.

A. We worked the shelter deck too.

Q. When did you work the shelter deck?

A. That I can't say; some part of the voyage.

Q. Have you logbook?

A. No, I haven't.

Q. What became of your logbook?

A. It was lost with the ship.

Q. Your smooth log as well as your rough log?

A. Everything.

Q. Your logbook would show which bunkers you worked, wouldn't it?

A. Well, I don't think it would, not particularly, which we are working; no, it wouldn't.

Q. Don't you put down which bunkers you are working?

A. No.

Q. How could you get the coal from the shelter deck to the fire room without going through the permanent bunkers?

A. Well, there was a hatch situated right over the chute and the chute was in the athwartship bunker and it would drop through the chute right into the stokehole.

Q. On the floor of the stokehole?

A. Yes.

Q. In front of where the men were working?

A. Yes, sir.

Q. Right in front of the boilers?

A. Yes, sir, on the stokehole place.

[fol. 411] Q. What is the distance between the fire room bulkhead and the boilers?

A. I should think 8 feet.

Q. And you say you dumped the coal right down that 8 feet?

A. No, the chute came level with the bulkhead and you would fill the chute up and it would gradually run down as the fireman wanted it to go.

Q. Where was that chute?

A. In the athwartship bulkhead, lower bulkhead.

Q. Athwartship lower bulkhead?

A. Athwartship lower bulkhead.

Q. So I am right in saying that the chute emptied itself into the bunker?

A. It was entirely separate from the bunker, was the chute, a built casing inside the athwartship bulkhead.

Q. It was inside the athwartship bunker?

A. Yes.

Q. And that bunker is down in the bottom of the ship?

A. Yes, sir.

Q. So I am right in saying that in order to get the coal from the shelter deck to the fire room you have to dump it into the chute, which empties it into the fire room?

A. Yes, sir. The between deck bunkers, you have to let

it go so far down and the top of the chute will be bare, and you can put the coal down.

Q. I show you Exhibit No. 17 and ask you if that paper was ever called to your attention by Mr. Brackenbury?

A. Yes, sir.

Q. Now, you told I think either the Court or Mr. Keating, that you expected the coal would be out of the between decks in a fortnight, that is the coal that you took away in August?

A. Yes.

Q. You knew that that coal was being taken over for the [fol. 412] use of one of the other steamers, didn't you?

A. Yes, sir.

Q. And you knew that wouldn't be used by the "Galileo" at all?

A. No, we shouldn't use that coal.

Q. And that all of the coal that was in the No. 3 between decks and in the No. 3 shelter decks, which was on the "Galileo" when she left New York August 28, 1926, was there not for use on the "Galileo" at all, that is right?

A. I understood so; there was plenty of other coal.

Q. And that coal was for the use of another steamship?

A. Yes, sir.

Q. And you never intended to use it, nor did anyone on your ship intend to use it?

A. No, sir.

Q. That was pursuant to instructions which you received from your owners?

A. Yes, sir.

Q. The coal which was supplied you here you knew was supplied by your shore agents?

A. Yes, sir, the Morrisdale Coal Company.

Q. And it was ordered by Ellerman's Wilson Line, Inc., New York?

A. Yes, sir.

Q. And if you thought that that was improper coal, the second lot you got, you would certainly have reported it to somebody?

A. I hardly get you.

Q. If you thought that that coal was poor coal which your Ellerman's Wilson, Inc. had bought——

A. Yes.

Q. And the people who supplied it were cheating your owner, you would have said something about it, wouldn't you?

A. That was my duty, yes, sir.

[fol. 413] Direct examination.

By Mr. Keating:

Q. Mr. Oxtoby, when did you first confess to me that the story about Magarelli was true?

A. When I arrived in New York.

Q. You had previously denied to me that it was true, hadn't you?

A. That is right.

Q. And I told you that you had to come into court and tell the truth, didn't I?

A. Yes, sir.

Q. And I took an affidavit when you were in my office?

A. Yes, sir.

Q. Now, what else did you tell me? You told me this was on your conscience, didn't you?

A. Yes, sir.

Q. How many times prior to October, 1929, when you made this affidavit which I am going to ask to have marked in evidence, had you told me the Magarelli story was false?

A. I couldn't tell you.

Q. Many times, wasn't it?

A. Several times, yes, sir.

Q. And you came into my office on October 29th with Mr. Brackenbury?

A. Yes, sir.

Q. And you told me that you had lied to me?

A. Yes, sir.

Q. And I told you you would have to come before this Court and tell the truth, didn't I?

A. Yes, sir.

Q. And before your God, Mr. Oxtoby, is this story about Magarelli true or is it not true?

A. It is true.

Mr. Keating: I ask to have the affidavit made to me on October 29th marked as an exhibit in this case.

Mr. Jones: I object to that, if your Honor please; we have this man's testimony.

[fol. 414] Mr. Keating: I want it very clear what this story is.

The Court: How do you justify this offer?

Mr. Keating: Mr. Jones has suggested perhaps that this story about Magarelli is made up. It is a painful thing for me to state what happened, but the first I knew about the story was on August 29th, before the trial——

Mr. Jones: You know me too well to think that I could suggest any such thing about you, Mr. Keating.

The Court: I don't see how this affidavit could in any way verify Mr. Jones' contention in reference to anyone other than yourself, and he makes no such suggestion as to you.

Mr. Jones: No, I never made any such suggestion.

The Court: I sustain the objection with exception. It may be marked for identification.

(The affidavit is marked for Identification, Exhibit H of this date.)

By Mr. Keating:

Q. Had Mr. Brackenbury in England asked you whether this story of Magarelli was true?

A. Yes, sir.

Q. And what did you say to him?

A. I said it was not true.

Q. When did you first admit, Mr. Oxtoby, that the story was true?

A. As I have testified, when we were coming across from England.

[fol. 415] Q. How did you come to make the confession then, after lying about it all these years?

A. Well, I knew something would have to come out.

Q. You knew you had to go on this stand under oath?

A. That is right.

Q. That is what was on your mind, wasn't it?

A. Yes.

Recross-examination.

By Mr. Jones:

Q. When did Mr. Brackenbury first ask you about this story?

A. He didn't ask me about it; I told him about it.

Q. Well, as I understood you when I was questioning you, you told me that the first time you told him anything about it was when you were coming over here to testify in this case?

A. I confessed then that Magarelli had made the statement, but previous to that he had asked me on several occasions whether Magarelli's story was true.

Q. When did he first ask you in Hull, whether Magarelli's statement was true?

A. I can't tell you.

Q. Was it shortly after this disaster?

A. No. I can't remember when he asked me.

Q. And you haven't been fired by Mr. Brackenbury today, after you have confessed today to a lie and what you no doubt will concede was gross negligence—you haven't been fired by Mr. Brackenbury yet?

A. Well, we are on the case. I don't know what will happen to me afterwards.

Q. And because you are a witness in the case he is not firing you?

A. I can't tell you.

[fol. 416] Gus Magarelli, being duly sworn and examined as a witness for the respondent, testifies:

Direct examination.

By Mr. Keating:

Q. Mr. Magarelli, what is your business?

A. Longshoreman.

Q. A little louder.

A. Longshoreman.

Q. How long have you been a longshoreman?

A. 17 years.

Q. For whom do you work?

A. F. Jarka & Company.

Q. And are they contracting stevedores?

A. Yes, sir.

Q. Are you a laborer or a foreman?

A. A foreman.

Q. How long have you been a foreman?

A. For 7 years.

Q. And are you a foreman of some particular kind of stevedores?

A. I got only the coal end of it.

Q. You are a foreman of coal trimmers?

A. The coal trimmers.

Q. Mr. Magarelli, do you remember a ship called the "Galileo"?

A. Yes, sir.

Q. Do you recall having been aboard of her in August, 1926?

A. Yes, sir.

Q. What were you doing on board at that time?

A. Unload the coal in the ship.

Q. Do you remember the coal that was put in No. 3 between decks and No. 3 shelter deck?

A. Yes, sir.

Q. Were you there when that was being done?

A. I was there, yes, sir.

Q. Did your men trim any of the coal in the No. 3 between decks?

A. Yes, sir.

Q. How many men did you send down into that space?

A. Eight.

[fol. 417] Q. And was that in the morning or in the afternoon?

A. That was in the morning.

Q. Did you go down with them at first?

A. No.

Q. Now, in the course of the morning something happened?

A. Yes, sir.

Q. What was it?

A. There was a man that trimmed the coal—eight men, I have, that trimmed the coal in the between decks, and so they started to kick and holler, it was too warm down there, and so one of the head men on that gang come up on deck and told me, he says, "Those men down below they can't work no more, one of my men fell out, he get sick."

Q. Did he say anything else?

A. He says, "The coal, it is too warm."

Q. What did you do then?
A. So I went down in the hatch myself.
Q. And where did you go when you went down?
A. In the between decks.
Q. No. 3?
A. No. 3, yes.
Q. And what did you do when you got down there?
A. When I got down there I felt the coal.
Q. Will you describe what the coal felt like? Did you put your hand on it?
A. Yes, I did.
Q. All right; tell the Court exactly what happened.
A. Well, I came down myself and I see it was so warm below and I felt the coal, and when I felt the coal the coal was warm.
Q. How warm was it?
A. I can't say how warm it was, but it was warm so that all the men could stay there only 10 or 15 minutes to work.
Q. Why couldn't they stay longer?
A. Because the coal was too warm.
Q. What did you do?
[fol. 418] A. Well, I told my men to work 10 or 15 minutes each, 4 and 4, 15 minutes to work and 15 minutes to stay in the air.
Q. Did you come up on deck?
A. Yes.
Q. Did you see anybody on deck?
A. I saw the chief engineer.
Q. That is the man who has just testified?
A. Yes, sir.
Q. Did you have any conversation with him?
A. Yes.
Q. What did you say to him?
A. I says, "Chief, my men be kicking there down below, it is warm, and they can't stay down below." He says, "What is the matter?" I says, "The coal is very hot."
Q. And what did he say?
A. Well, he don't pay no attention to me, just said the coal was all right.
Q. He said the coal he used was all right?
A. Yes.
Q. How long did that conversation take?
A. About two minutes.

Q. And then they went on loading the coal?

A. Yes.

Q. Did the chief stand around there when they were loading?

A. He would stay there for a while and then he would go away.

Q. And when did he first tell you that story, Mr. Magarelli?

A. I can't remember, about a year ago, something like that.

Cross-examination.

By Mr. Jones:

Q. When you were speaking about the hold being warm, which lot of coal are you talking about, the coal that was already there or the coal that you were going to put in?

A. The coal that were in.

[fol. 419] Q. You mean the coal that was there before?

A. Yes.

Q. Was there any smoke you could see or gas you could smell?

A. I could smell the gas over the side, there was gas come on the coal boat.

Q. Now, on which side of No. 3 between decks was the coal, the hoister, could you form any opinion?

A. Well, that was about the middle of the hatch, it was on my right, my right side.

Q. Your right side. If you were standing looking forward toward the bow of the ship your right side would be the bow of the ship?

A. Yes, sir.

Q. If you were standing looking back toward the stern of the ship your right side would be the stern of the ship. Which way were you looking, toward the bow or the stern when you say your right side?

A. The bow.

Q. So when you say on the right side, you mean on the starboard side of the ship as well as your right side?

A. That is right.

Q. Now, was this heated coal in the forward or the after end of the compartment?

A. Was it what?

Q. (Repeated.) Was this heated coal in the forward or the after end of the compartment?

A. Well, it was right in the middle.

Q. You are employed by a man named Jarka?

A. Yes.

Q. And he is employed by whom to do this work?

A. By Ellerman's Wilson Line.

Q. Did you make any report to Mr. Jarka about this?

A. No, sir.

Q. Did you make any report to anybody on the dock about it?

A. Nobody but the chief engineer.

Q. You never said anything to the captain about it?

A. No.

[fol. 420] Q. How soon after this ship got afire and came back here and was beached in the Hudson River, and everybody saw it in the Hudson River, and there were pictures in the paper, and everybody was talking about it, there was quite a commotion——

A. Yes, sir.

Q. How soon after that did you tell anybody about the coal being hot?

A. The first time that I went to the law office when he called me.

Q. How soon after the occurrence did you tell anybody about it?

A. I can't remember certainly the month or the day of the year.

Q. Was it a year after the disaster?

A. No, two or three months afterwards.

Q. Two or three months afterwards was the first time you said anything to anybody about it?

A. Yes, sir.

Q. To whom did you mention it?

A. I don't know.

Q. Did you go over to the Ellerman's Wilson Line and tell anybody about it?

A. No.

Q. Did you tell Mr. Jarka?

A. He called me and asked me if I knew anything about the coal, and I told him, he called me to the office.

Q. Which office?

—. The law office.

Q. When did you first mention it to Mr. Jarka?

A. When he seen me.

Q. When did you tell him that?

A. After two or three months.

Q. What was the first time you mentioned it to anybody, two or three months?

A. Yes, sir; he took me——

Q. Took you to Ellerman's Wilson Line's office two or three months after that?

A. Yes, sir.

Q. And then you told them all about it?

A. Then I told them all about it.

[fol. 421] Q. Who was there in the Ellerman's Wilson Line's office when Mr. Jarka took you there on the first occasion that you talked about this coal, who was there? What gentleman was there that you talked to?

A. There were two or three fellows there in the main office, that Mr. Georgie.

Q. Mr. Georgie?

A. Yes, that is all the name I know.

Q. You don't know his last name?

A. I know Mr. Georgie very good, but I don't know anybody else.

Q. Is that his first name or his last name?

A. I don't know.

Q. But everybody knew Mr. Georgie?

A. Yes, sir.

Q. Can you describe him to us? What was his appearance?

A. He was one of the head men in the office.

By Mr. Keating:

Q. And they brought you over to my office, did they, Mr. Magarelli?

A. Yes.

By Mr. Jones:

Q. Now you tell me and tell Mr. Keating that it was a year ago when you first went over to Mr. Keating?

A. Well, I don't know which day or which year, because I don't take care of this business.

Q. I only want to know what the actual facts are, that is the reason I am asking you these questions. You told me that two months after this catastrophe——

A. Two or three months.

Q. Well, give it as much latitude as you wish, two or [fol. 422] three months after the catastrophe, you went and told Mr. Jarka——

A. He came to see me on the pier and asked me the story of how they put the coal in.

Q. So Mr. Jarka came to see you?

A. Yes.

Q. And you and Mr. Jarka went to see Mr. Georgie, who is in Ellerman's Wilson Line's office here in New York?

A. Yes.

Q. That was two or three months after the fire?

A. Yes, sir.

Q. Now, I understood you to say that you first told Mr. Keating about it and that you told me the same thing, about a year ago, and now you say you went over to see Mr. Keating at the time you went to the Ellerman's Wilson Line office?

A. At the same time, yes.

JOHN H. NEALE, being duly sworn and examined as a witness for the respondent, testifies:

Direct examination.

By Mr. Keating:

Q. Mr. Neale, what is your position in life?

A. Vice-President and Director of Ellerman's Wilson Line of New York, Inc.

Q. How many years have you been employed by the Ellerman's Wilson Line of New York, Inc.?

A. Since it was in session, April 21, 1921.

Q. Are they incorporated under any law of one of our states?

A. Yes, sir, Maryland.

Q. It is a Maryland corporation?

A. Yes, sir.

Q. And what is their relation to the Ellerman's Wilson Line of Hull?

A. New York agent, attending to the vending of cargoes, the collection of freights, supplying stores, and so forth. [fol. 423] Q. Who owns the stock of Ellerman's Wilson Line of New York, Inc.?

A. Ellerman's Wilson Line, Ltd., of Hull.

Q. You are their New York agent?

A. Yes, sir.

Q. Do you know a concern called the Ellerman-Buckner Steamship Company, Ltd.?

A. I know there is a concern of that name, yes, sir.

Q. Has Ellerman's Wilson Line, New York, Inc., any connection with that company?

A. No, sir, none whatsoever.

Q. Do you know who the agents are in New York of Ellerman & Buckner Company?

A. Norton Lilly & Company.

Q. Have you any connection with Norton Lilly & Company?

A. No, sir.

Q. Have they any connection with you?

A. No, sir.

Q. Has Ellerman & Buckner Company anything to do with the Ellerman's Wilson Line, New York, Inc.?

A. No, sir.

Q. Have you anything to do with the Ellerman & Buckner Steamship Company?

A. No, sir.

Q. Will you describe, Mr. Neale, just what the duties of the Ellerman's Wilson Line, New York, Inc., are with reference to your agency?

A. Well, we get a cable that a steamship has sailed, and we make preparation for the berthing of the steamer and advertising in the papers, and endeavor to book all the cargo we can for her and get it alongside of the steamer.

Q. You engage the freight?

A. Yes, sir.

Q. Do you engage the freight?

A. Yes, sir.

Q. Who issues the bills of lading?

A. We do.

Q. Who makes up the manifest?

A. We do.

Q. They are made up in the New York office?

A. In the New York office.

[fol. 424] Q. Who orders the ordinary ship's stores?

A. The chief steward orders them.

Q. Do you have anything to do with that?

A. All we do is to check the bills against the signature of the chief steward and the master, and pay the bills.

Q. You don't actually order the stores yourself?

A. No.

Q. Now, prior to June, 1926, what were your duties with respect to bunkers for the steamers?

A. Prior to June, 1921?

Q. If the steamer required any coal in New York did you have any duties with respect to that?

A. Oh, we measure the space and see if he had coal enough, and if he hadn't, he would report to the captain that he needed so many tons of coal, and those orders would be transmitted to us by telephone, and we would communicate with the coal people and they would put it alongside of the ship.

Q. Was it any part of your duty to tell how many tons of coal was required?

A. No, sir, not for the ordinary run.

Q. Did you have anything to do where the captain and the chief engineer put the coal on board the ship?

A. No, sir.

Q. Now, Mr. Neale, I show you Exhibits C and D, and ask you to tell me whose initials are on those two cables?

A. E. L. S. Sanderson.

Q. What was Mr. Sanderson's connection with the Ellerman's Wilson Line, New York, Inc.?

A. He was the president.

Q. Is Mr. Sanderson alive?

A. No, sir.

Q. Do you know when he died?

A. He died September 9, 1927.

Q. Now, you were ordered to take this extra coal for [fol. 425] transfer according to this cable for the "Francisca"?

A. Yes, sir.

Q. It has been testified that Mr. Sanderson dealt with that with the captain; you know nothing about it yourself, do you?

A. No, sir.

Q. Does your New York office have anything to do with the shipping of coal when it is required?

A. No, sir, except pay the bill of the stevedore when it is rendered.

Q. Who decides that?

A. The chief engineer.

Q. He has authority to require the shipping?

A. No; he reports to the captain that he requires so much coal to be shipped, and they arrange that the stevedores shall do the job.

Q. Does the New York office give any instructions on the matter?

A. No, sir.

Q. Now suppose some repairs are required on the steamer at this port, how is that matter dealt with?

A. If it is hull repairs, the captain, upon his arrival, reports to the pier superintendent that he requires a man to come down and see him, and if it is engine room repairs, the engineer asks the captain to arrange that the man will come down who takes care of the engine repairs.

Q. Does the New York office have anything to do with the engine repairs?

A. No, sir.

Q. What do you do in that case?

A. We simply pay the bill against their signature.

Q. Do the owners of the "Galileo"—have they a marine superintendent in New York?

A. No, sir.

Q. Have they a superintending engineer in New York?

A. No, sir.

Q. Who is in charge of the pier?

A. Their superintendent.

Q. What is his name?

A. H. J. Hicks.

Q. Has he any authority over the officers of the various ships?

A. None whatsoever.

[fol. 426] Q. He lays out the cargo for these vessels, you engage it?

A. We engage the freight and make up a list showing what cargo is engaged, and that is sent over to the pier superintendent, and upon receipt by him, he goes on board the ship and consults with the master and chief officer as to where the cargo should be loaded.

Q. Mr. Hicks is employed by the New York agency?

A. Yes, sir.

Q. Has he any authority to order the master or chief engineer to put some particular cargo in a particular place on the ship?

A. No, sir.

Q. Is there a cargo plan prepared for the cargo that goes aboard a ship?

A. Yes, sir.

Q. That was done for the "Galileo"?

A. Yes, sir.

Q. Who prepares that plan?

A. A clerk on the pier.

Q. Do you know his name?

A. Muller.

Q. Do you know a man—there was some suggestion here the other day about a man named Isbister; do you know a man by that name?

A. Yes, I know Captain Isbister.

Q. Has he any connection with your company?

A. No.

Q. Has he any connection with Ellerman's Wilson Line, Ltd., of Hull?

A. No.

Q. Do you know a man named Nevins?

A. I know a man named Nevins.

Q. Is he connected with your company in any way?

A. No, sir.

Q. Is he connected with the Ellerman's Wilson Line, Ltd., Hull?

A. No.

Q. Has he anything to do with your ships?

A. Nothing.

Q. Have you ever been a ship master?

A. No, sir.

[fol. 427] Q. Marine engineer?

A. No, sir.

Q. Has Mr. Georgie ever been a ship master or ship engineer?

A. No, sir.

Q. Have you any technical people in the New York office?

A. No.

Q. What do you know about coal?

A. Nothing, except that it is needed for a ship.

Q. You are not a coal expert?

A. No, sir.

Q. Do you know whether the late Mr. Sanderson was a technical man?

A. He was not.

Q. He was a business man, was he not?

A. Yes, sir.

Q. Now, do you make a report to Hull on each voyage?

A. Yes, sir.

Q. Do you make an agent's report?

A. An agent's report.

Q. Tell us what that report consists of?

A. It gives the arrival of the steamer at the pier.

Q. It is a written report?

A. A written report showing all particulars as to the arrival of the ship here, and we sent it to Hull, and it shows the gross earnings of the voyage.

Q. Now, besides that agent's report what else do you send?

A. We send a complete manifest, a stowage plan, and dock sheets.

By the Court:

Q. From what information is the stowage plan made out?

A. The cargo sheets which are made up on the pier. As each shipment is delivered it is delivered with a dock receipt, and the dock clerk gives the number and writes it on the dock sheet and the measurement is estimated what each particular consignment amounts to, both as to weight and measurement.

[fol. 428] Q. Well, who fixes the place in the ship that a certain shipment will occupy?

A. All the stowage is arranged by the captain and chief officer with the assistance of Mr. Hicks, who shows them what cargo is engaged.

Q. He shows what cargo is engaged?

A. Yes, sir, he gets a new list every day.

Q. And they determine where they will put it and tell him?

A. That is it.

By Mr. Keating:

Q. Now, Mr. Neale, I show you what appears to be a copy of the agent's report for voyage 106, which is the voyage from New York of July 2, 1926, which I have been calling the June voyage.

Mr. Keating: I would like to say to Mr. Jones in this connection that the original of this report, which I think Mr. Jones is entitled to, is on the way here and will be here before the trial is ended; I had a cable this morning to that effect. I would like to have this go in temporarily, with the understanding that the other actual original as signed will be produced.

Q. As far as you know, is that a copy of the voyage report which was made for what I call the June voyage? (Handing witness paper.)

A. Yes, sir.

Q. The original of that will be signed by whom?

A. By the president.

Q. By Mr. Sanderson?

A. Yes.

Mr. Keating: I ask that this be marked in evidence.

(It is marked Exhibit I of this date.)

[fol. 429] Q. Now, this agent's report for June, Exhibit I, was mailed when?

A. It was mailed the first mail after the steamer sailed.

Q. Do you send it with an accompanying letter?

A. No, sir.

Q. Just send the report?

A. It is shown on here that it is for Hull, and it is sent with our stamp.

Q. And together with this you send the cargo plan?

A. One or some.

Q. Do you send one or some?
A. Three copies.
Q. Of the cargo plan?
A. Yes, sir.
Q. It went with this report?
A. In the same mail.
Q. Did you send a copy of the manifest?
A. A copy of the manifest is always sent in the first mail after the steamer sails.
Q. Is this a copy of what I would call the June voyage manifest?
A. Yes, sir, the final copy.

Mr. Keating: I ask that it be marked.

(It is marked Exhibit J of this date.)

Q. Now, in addition to the manifest do you also send what you have described as the pier sheets?
A. Yes, sir, the cargo sheets; they are given to the chief officer.
Q. They are not sent to the owners?
A. No, he takes them with him together with a copy of the stowage plan.
Q. On board the ship?
A. On board the ship.
Q. And those are what?
A. The cargo sheets—dock sheets.
Q. Now, I observe in looking at the June manifest that [fol. 430] there is nothing said thereon about bunker coal. Do you include bunker coal in the ship's manifest?
A. No, sir.
Q. How is that carried?
A. Bunker coal is reported on the ship's stores when the vessel clears in the Custom House.
Q. It doesn't appear on the regular, the ship's manifest? It appears as ship's stores?
A. Yes, sir.
Q. Ship's stores is the technical name?
A. Yes, sir.
Q. Now, I show you what purports to be a copy of the agent's report for voyage 107, "Galileo", leaving New York August 28, 1926, and ask you whether, as far as you know, that is a copy of the agent's report for that voyage?

A. Yes, sir.

Mr. Keating: I ask that it be marked in evidence.

(It is marked Exhibit K of this date.)

Q. Is there any accompanying letter with Exhibit K?
A. No, sir.
Q. You just send them the report?
A. That is all.
Q. Now, together with that report did you also send them a copy of the ship's manifest for the August voyage?
A. I don't think that they were sent out.
Q. You don't believe that you sent that one?
A. No.
Q. Why was that?
A. Because the steamer returned and it was lost, the papers would be required here by the cargo adjusters.
Q. The average adjusters?
A. The average adjusters.

[fol. 431] Mr. Keating: I ask that this manifest be placed in evidence.

(It is marked Exhibit L of this date.)

Recess until 2:15 P. M.

Met pursuant to adjournment at 2:15 P. M.
Present: As before.

JOHN H. NEALE resumed the stand.

Direct examination.

By Mr. Keating (continued):

Q. Mr. Neale, I show you Exhibit K, which is the agent's report for the "Galileo" August voyage. Was that report sent to Hull to the owners before or after the ship sailed?
A. These reports are always sent by the first mail steamer after the steamer sails; they cannot be completed until the steamer's manifests are completed, for they haven't the earnings for the east voyage.
Q. You haven't the coal either, have you?
A. No.

Q. I show you Exhibits E and F, which are the chief engineer's coal reports. Do those come into the New York office?

A. Yes, sir.

Q. When do they come in, before or after the steamer sails?

A. After the steamer has sailed.

Q. Is that the first time you see them?

A. Yes, sir.

Q. Do you get any other report than that for the coal?

A. No, sir.

Q. What do you keep them for, what do you do with them?

A. We use them for checking purposes on the coal bills, [fol. 432] and filling in these reports.

Q. For any other purpose?

A. That is about all.

Cross-examination.

By Mr. Jones:

Q. Mr. Neale, I assume from your answer to one of the questions put to you by Mr. Keating that the Ellerman's Wilson Line, New York, Inc., was a corporation whose stock was owned altogether by Ellerman's Wilson Line, Ltd., Hull. That is right, is it?

A. That is right.

Q. In other words, Ellerman's Wilson Line, New York, Inc., is a corporation which is simply a subsidiary of the Ellerman's Wilson Line, Ltd., Hull; that is correct, is it?

A. Yes, I think it is.

Q. Now, you stated, as I remember it, that you booked cargoes for the ships of the Ellerman's Wilson Line?

A. Yes, sir.

Q. I assume you followed the usual practice in booking cargo for a named vessel?

A. Yes, sir.

Q. And that cargo is booked to a certain considerable extent before the ship arrives, for you have order for a ship coming in, you book cargo for that ship before she gets here?

A. That is right.

Q. And in doing that you of course keep in mind the capacity of the ship and how much she can carry; that is true, isn't it?

A. That is right.

Q. So you book them as full as you can get them, for you want to get as much freight on your ships as you can?

A. That is correct.

Q. And you did that for the "Galileo", didn't you?

A. Yes.

Q. And you have someone in your organization who goes [fol. 433] over the ship's plan with a view to ascertaining how much you can carry too, don't you?

A. That is right.

Q. And you fill in every available space you can with cargo?

A. That is right.

Q. And in booking your cargo you keep in mind that you must have a certain amount of heavy cargo and a certain amount of light cargo if you are going to fill her up, don't you?

A. Well, we have to take what we can get.

Q. But you have that in mind, what we call both weight and measurement cargo?

A. Yes.

Q. Now, with the "Galileo" had you booked this cargo before she arrived?

A. I wouldn't say all of it.

Q. But most of it?

A. A good portion of it, probably, the grain undoubtedly.

Q. I show you a bill of lading and ask you if you can tell me what that bill of lading is?

A. Yes, it is a bill of lading covering the shipment of 8 pieces of plates.

Q. On the "Galileo"?

A. On the "Galileo".

Q. And by whom is it signed?

A. The bill of lading clerk, W. J. Chatfield.

Q. Signed pursuant to instructions given him by Ellerman's Wilson Line, New York, Inc.?

A. Yes.

Q. As agent for the Ellerman's Wilson Line, Ltd., Hull?

A. Yes, sir.

Mr. Jones: I offer it in evidence.

(It is marked Exhibit 22 of this date.)

Mr. Jones: I also offer in evidence on the consent of Mr. Keating an invoice of the United States Steel Products Company, covering 8 pieces of steel mentioned in the bill [fol. 434] of lading, and the steel is described as 8 pieces tank steel plate, 8 inches by 1½, 59 feet 3 inches long.

(It is marked Exhibit No. 23 of this date.)

The Court. Were these only 8 pieces of steel 8 inches wide in the whole of the shelter deck No. 2?

Mr. Keating: Yes, so far as I know.

The Court: It would take up a very small space.

Mr. Keating: Very; they were only 8 inches by 1½ inches.

The Court: Long steel rods?

Mr. Jones: They call them tank steel plates.

The Court: Have you got any information as to there being other cargo in the No. 2?

Mr. Jones: All I have, if your Honor please, is the stowage plan; that all appears on the stowage plan.

Mr. Keating: The report of the agent shows that there were 103,000 cubic feet of vacant space on this steamer when she left New York, sir.

The Court: Well, that isn't very big; this shelter deck space must have been much larger than that.

Q. Who hired Jarka, the stevedore?

A. When there is any work about that the bids are given out by contracts.

Q. Who gives out the bids?

A. We do, and the one who submits the most attractive [fol. 435] bid gets the contract.

Q. Who buys the coal for Ellerman's Wilson Line ships?

A. We pay for it.

Q. Who orders it?

A. I usually do.

Q. Do you put that out to bids too?

A. At that time we were using Morrisdale coal; we had been using it for years, and I suppose——

Q. So you determine the kind of coal?

A. Oh, no, we don't determine the kind of coal.

Q. Who determines it?
A. The contractor.
Q. Who made the contract?
A. Mr. Sanderson.
Q. That is Ellerman's Wilson Line?
A. Yes, sir.
Q. And those contracts you have approved by your Ellerman's Wilson Line at Hull, before you finally enter into them, don't you?
A. I believe they do, yes.
Q. Now, isn't it true also that with respect to the "Galileo" on the August voyage that you ordered the coal pursuant to instructions which you received from Hull by cable?
A. Yes.
Q. That is Exhibits C and D in this case?
A. The additional coal.
Q. You ordered that pursuant to direct instructions from the owner?
A. That is right, notifying the captain of the cable.
Q. Now, when it becomes necessary to repair ships of the Ellerman's Wilson Line at New York who, in your organization, has anything to do with those repairs?
A. Nobody in the organization. The captain is the one who decides whether he requires something to be repaired.
Q. Do you mean to say that you have no one outside of the ship's company whose duty it is to look over your ships to ascertain whether or not they need repairs?
[fol. 436] A. No, sir, and I can tell you why. The ships are traveling back and forth from the home port, and they are home every few weeks, and we don't require anyone on our side, for that reason.
Q. When it does become necessary to repair them here, do you ever have anyone from the outside to look at them?
A. No, sir.
Q. No independent surveyor at all?
A. No, sir.
Q. Suppose you have what we call a damage case, do you have anyone outside to look at it then?
A. Then we would call the company in which the steamer is insured; it would be Lloyds or whoever it might be.
Q. Don't you have anyone but the surveyor to look at the ship?

A. I can't say that we do.

Q. Do you call anyone representing your company to look at the ship?

A. If a master requires a repair we consider he knows what the ship needs and we leave it to his jurisdiction.

Q. And you don't have anyone to look at the situation?

A. No, sir.

Q. Or to check up on the engineer?

A. No, sir, we take their signatures on the bill.

Q. Do you know whether or not Mr. Sanderson was aboard the "Galileo" before she sailed in August, 1926?

A. No, sir, I couldn't tell you.

Q. You don't know?

A. I don't know.

Q. Are you president or vice-president or secretary or treasurer of the Ellerman's Wilson Line, New York, Inc.?

A. At the present time?

Q. Yes.

A. I am vice-president.

Q. What was your position with the same line at the time of the disaster?

A. A departmental head.

Q. What is the capital of Ellerman's Wilson Line, New [fol. 437] York, Inc.?

A. I think it is a hundred thousand dollars.

Q. And all of the shares of the stock are owned by Ellerman's Wilson Line, Ltd., Hull?

A. That is right.

Q. Who was the president in August, 1926?

A. Mr. Sanderson, E. Lloyd Sanderson.

Q. And who was the vice-president?

A. Mr. Charles H. Georgi.

Q. How do you spell it?

A. G-e-o-r-g-i.

Q. And who was the secretary?

A. I think I was in—1926—no, I think I am giving you wrong information, I think in 1926 the president was E. Lloyd Sanderson, that was in November, and the secretary was Charles H. Georgi.

Q. And who was the treasurer?

A. Edmund A. Collins.

Q. And who were the directors?

A. Lloyd Bowen Sanderson, E. Lloyd Sanderson, Charles H. Georgi, Everett Masten, and Frank A. Bull.

Q. How was Ellerman's Wilson Line, New York, Inc. paid for their service?

A. Why, we received a commission on the manifest, a percentage, 4 per cent outward and 20 per cent inward.

Q. What arrangement did they have for office space?

A. Well, we had offices at 26 Broadway.

Q. And did the Ellerman's Wilson Line, New York, Inc. pay the rent for those offices?

A. Yes, sir.

Q. Did they occupy the offices with Sanderson & Son?

A. No, sir.

Q. It was a separate and distinct corporation?

A. It was a separate and distinct corporation.

Q. And they had separate and distinct offices for which they paid rent?

A. Yes, sir.

Q. Did you have a corps of bookkeepers and accountants in your office?

A. Yes, sir.

[fol. 438] Q. Which Ellerman's Wilson Line, New York, Inc. paid?

A. Yes.

Q. Did you have correspondence either by letter or by cable with Ellerman's Wilson Line, Ltd., Hull, with respect to booking cargo for the various ships?

A. We had what we call a general letter which we wrote every voyage in which we have a resume of what happens during the week and what the prospects are; it is all problematical.

Q. It is a matter of routine?

A. It is a matter of routine.

Q. And have you any letters in your file with respect to the "Galileo" on the June or August voyages?

A. I should say yes.

Q. Will you be good enough to produce those letters?

The Court: Have you got them here?

The Witness: No.

The Court: He hasn't them here.

Mr. Keating: We will have them here in the morning; we have all the correspondence.

By the Court:

Q. Was this Mr. Sanderson the well-known Sanderson in the shipping world? Isn't there a well-known name of Sanderson?

A. L. B. Sanderson, it is Sanderson & Son, who was acting for our line at one time.

Q. Did he act for other lines?

A. He acted also for the Royal Mail, Lloyd Bowen Sanderson was president of Sanderson & Son, acting in the capacity of agent for the Atlantic Transport Steam Navigation Company, Lamport & Holt, and Nelson Line.

[fol. 439] By Mr. Jones:

Q. They were agents for the "Vestris" when she went out on her fatal voyage?

A. Sanderson & Son, yes, sir.

By Mr. Keating:

Q. Is Mr. Bowen Sanderson dead?

A. Yes, sir.

Q. He wasn't the active head of your company?

A. No, sir.

Q. Who was the active head?

A. E. Lloyd Sanderson was the active head.

Mr. Keating: May it appear on the record that I have produced certain correspondence for Mr. Jones' inspection?

The Court: Yes.

By Mr. Jones:

Q. You were in court this morning when the chief engineer and Magarelli were testifying, were you not?

A. Yes, sir.

Q. What was the first you heard of this story between the chief engineer and Magarelli?

A. I should say about a year ago was the first I ever heard of it.

Q. That was the first time you ever heard of it?

A. Yes, sir.

Q. I notice a number of letters from Ellerman's Wilson Line, Ltd., in which they say—a typical thing is the letter

dated the 16th of September: "Grain: We are glad to have your cables reporting bookings at 3/6d. and understand total forward engagments are now:

"Idaho," 24th Sept., 5 Loads at 3/.
4 Loads at 3/3.
1 Load at 3/6.
[fol. 440] "Marengo," 8th Oct., 5 Loads at 3/6d.
October shipment, 5 Loads at 3/6d.
Oct.-Nov.-Dec. monthly, 5 Loads at 2/6d a/c.
A. E. Strauss & Co.
Oct.-Nov.-Dec. monthly, 5 Loads at 3/-.
Sanday & Co."

Apparently from that letter and from a number of other letters which I have perused, it was a common practice for you to cable when you made these bookings?

A. Bookings of grain, yes, sir.

Q. And from a letter dated the 3rd of September, I read the following: A letter addressed to Messrs. Ellerman's Wilson Line, Limited, Hull, England, written by Ellerman's Wilson Line, New York, Inc., Vice President—no signature, but Vice President typed in, and at the bottom of the letter is ELS:EBR, I suppose Mr. Sanderson wrote the letter. "'Galileo': We are writing you separately with regard to the unfortunate accident of this steamer. We cabled you on the 28th Aug. advising this vessel had left that day, having on board for

Hull	4,878 tons.
Newcastle	773 "
Antwerp	60 "

Also, 86 cases Gunpowder weighing about 8 tons, about which we have already written you. We sent you further message on the 31st, giving 'Galileo's' earnings as

Hull	£2,441.4.3
	$13,503.24
Newcastle	$5,067.00
Antwerp	$815.64."

[fol. 441] That, I suppose, is a letter that you sent?

A. Yes, that is a general letter.

Q. Now, you refer to having written separately, where is that letter, do you know?—You can read the letter and note what I referred to.

A. That would be September 3rd.

Q. I am quite right about that, am I not, Mr. Neale?

A. Yes.

Q. Then I call your attention also to a letter dated the 19th of August, 1926, which was received apparently by you on August 28, 1926. I have given those dates correctly, have I not, Mr. Neale?

A. That is right.

Q. And I call your attention to the following passage in that letter: " 'Galileo': We thank you for cables advising this steamer's arrival with you on the 17th.

As your grain engagements for this steamer now total 11 loads we are hoping you will be able to give her an approximately complete homeward cargo."

That is the letter you received before this steamer's actual departure, isn't it?

A. Yes, sir, the same day she sailed.

Q. Then I call your attention to a letter which is dated the 12th of August, 1926, written to you by Ellerman's Wilson Line, Ltd., Hull, which was received by you on August 21, 1926, and I will read the following passage from that letter: " 'Galileo': You will of course require to bunker this vessel for the homeward passage. If the coal strike is not ended we shall also require you to give her about 800 tons for transfer to 'Francisco', but about this we shall cable you later.

Grain engagements: We have to acknowledge your cable [fol. 442] reading 'Melady two "Galileo" 2/6', but as we have no trace of the shippers Melady on our list we are waiting your confirmation as to their identity. We hope you will be able to continue bookings at certainly not less than 2/6d."

What does the name Melady mean?

A. That means that a firm by the name of Melady had booked with us two loads of grain.

Q. What is the weight of the grain?

A. 214½ tons.

Q. Now I have before me a letter dated August 20, 1926, addressed by you to Ellerman's Wilson Line, Ltd., Hull,

from which I read the following paragraph: "'Galileo'. Reached New York on the 17th inst., which we cabled you. Steamer's discharge has now been completed, and in accordance with your cable received this morning are loading an additional 850 tons of bunker coal for transfer to the 'Francisco' on 'Galileo's' arrival at Hull, in addition to steamer's homeward bunkers. Since last writing we have accepted further grain for this steamer, making her total commitment at time of writing 11 loads of heavy grain for Hull at 2/9d, and we are in hopes of securing steamer's requirements prior to sailing which, after deducting space necessary for the bunker coal, we estimate as 18 loads. Present cargo prospects are:

Hull	3,100 tons
Newcastle	850 tons
Antwerp	50 tons

earnings on which we estimate between $21,000 and $22,000. We are further informed by Messrs. DuPont de Nemours & Company that we will undoubtedly receive 84 cases [fol. 443] of gunpowder in time to load on the 'Galileo'. We are therefore building a magazine in 'Galileo's' shelter deck and will be including this information in our sailing cable."

Where on the ship did you build that magazine?

A. I couldn't tell you the exact position.

Q. You don't know?

A. No.

Q. Can you look at the stowage plan and show me where it was (handing plan to witness)?

A. It is on one shelter deck.

Q. No. 1 shelter deck?

A. Yes.

Q. In other words, it is in the space marked F on this plan, isn't it?

A. Well, No. 1 is apparently this point. I think the 1 and 2 holds, it is open all the way through and there is a magazine there.

Q. Now I will draw a pencil mark around that so that we may be able to identify it. I draw a circle around it with an arrow pointing to it, and I write the word "Maga-

zine" along the shaft of the arrow. That is the space that you put the magazine for the powder, isn't it?

A. Yes, sir.

Q. And it was known on the 20th of August that you thought to build that magazine as appears on this letter—I wish you would look at the letter and see that I am quite certain in stating the facts.

A. That is correct.

By the Court:

Q. Who ordered that magazine built?

A. Well, it was a precaution that is adopted in carrying powder.

Q. Who ordered it?

A. We ordered it.

Q. Your company?

A. Our company, yes sir, it having been decided that [fol. 444] that was a good place to put it.

Q. Who decided that that was a good place to put it?

A. The master.

Q. Did you take it up with him personally?

A. I didn't, no, sir.

Q. You don't know then whether he did or not?

A. I know that everything is taken up with the master; this particular cargo was certainly taken up with him especially. We don't carry very much gunpowder.

Mr. Jones: Have you that letter which I asked for?

Mr. Keating (handing paper to counsel): This is the report of the accident, Mr. Sanderson's report.

Q. Now, as I understood you, Captain Isbister had nothing to do with your company?

A. That is right.

Q. I notice from this letter, dated the 3rd of September, 1928, being the report of the accident, that Mr. Sanderson writes as follows: "Our cable of 1st inst. was sent after full discussion in our lawyer's office, at which representatives of steamer, London Salvage Association, Johnson & Higgins, and Merritt & Chapman were present. Captain Isbister and Mr. Ross estimate that repairs to steamer if and when she is raised will exceed $100,000. At time the

above cable was dispatched, we were of the opinion that in view of this vessel laying outside the North River Channel, the United States Government would probably refuse to remove her in the event of your deciding to abandon her, but after further deliberation we cabled you on the [fol. 445] 2nd that it had been developed the position of steamer was considered navigable water and therefore there would be no obligation on the part of your goodselves or underwriters to remove vessel if abandonment was decided upon."

Mr. Jones: I think that means it was decided it was not navigable waters.

Mr. Keating: That is right.

Q. Now, Captain Isbister apparently was in on this case, wasn't he?

Mr. Keating: I employed him.

A. I don't know.

Q. You don't know anything about his employment?

A. No.

The Court: Is it a rule that if you sink your boat in navigable water you don't have to raise her yourself?

Mr. Keating: That is right, sir. Captain Isbister and Mr. Ross were two of the experts I employed.

Q. Now, there is this paragraph: "We have also to acknowledge receipt of your cable of September 1st giving us the insured values of the 'Galileo', and in view of its strictly confidential nature, we handed this over to Mr. Keating, of our counsel, for his information. You will have seen that in order to distinguish the sequence of messages referring to this unfortunate accident we have numbered our cables." You had apparently quite a number of cables in connection with this accident.

[fol. 446] Mr. Keating: We have them.

Mr. Jones: May I see them?

(Mr. Keating hands a file to counsel.)

Mr. Keating make a note that we have produced the cables.

Q. Now I also note from this letter of September 3rd the following paragraph: "From Captain Barron's report

you will have observed that writer was on board 'Galileo' from 10:20 A. M. Sunday (29), until 4:30 P. M. that evening, and we would like to say that Captain Barron took all possible precautions in steamer's interest, and we feel that his actions during this disastrous fire were in every way justified and he did everything physically possible to save his ship. Our lawyers have taken depositions from Captain Barron, Chief Officer and Chief Engineer, which will be forwarded to you in due course." And that letter is apparently written by Mr. E. L. Sanderson, is that correct?

A. Yes, sir, that is correct.

Mr. Jones: That is all, if your Honor please, pending the examination of the cables.

By Mr. Keating:

Q. Mr. Neale, your company doesn't employ Mr. Ross, the other expert mentioned by Mr. Jones, does it?

A. No, sir.

Q. They were called in by me, were they not, those men?

A. Called in specially, yes, sir.

[fol. 447] Harry J. Hicks, being duly sworn and examined as a witness for the respondent, testifies:

Direct examination.

By Mr. Keating:

Q. Mr. Hicks, what is your business?

A. Pier superintendent.

Q. And by whom are you employed?

A. By the Ellerman's Wilson Line.

Q. New York?

A. New York.

Q. They are the people that pay you, are they?

A. Yes, sir.

Q. How long have you been pier superintendent for the Ellerman's Wilson Line, New York, Inc.?

A. A little over 7 years, and about 8 months, as assistant superintendent.

Q. Mr. Hicks, what has your training been? Are you a marine engineer or marine superintendent?

A. No, sir.

Q. How did you start life?

A. On the docks as a tallyman on the pier, about 23 years ago.

Q. Tallying cargo?

A. Tallying cargo and receiving cargo.

Q. Have you ever been to sea?

A. No, sir.

Q. Are you an expert on coal?

A. No, sir.

Q. Who is in charge of the pier where the "Galileo" loaded?

A. I am in charge of the pier.

Q. Does the Ellerman's Wilson Line at New York have a marine superintendent?

A. No, sir.

Q. Do they have a superintending engineer?

A. No, sir.

Q. Now, as pier superintendent, Mr. Hicks, what were your duties with respect to the "Galileo"?

A. Well, I have pretty near everything to do with the pier, pertaining to the pier, hiring clerks, hiring towboats, [fols. 448-a-k] broken doors, having them repaired, hiring lighters to ship cargo alongside of the steamer, seeing that the manifest is written up, checking in the laborers from the longshoremen, the overtime, and working with the stevedores unloading the steamers.

Q. What do you have to do with the cargo that comes on the dock?

A. Receive it and lay out the space where the cargo is to be placed on the dock.

Q. You have a check tallyman?

A. I have a checker and an assistant also.

Q. You have watchmen on the dock?

A. Yes, sir.

Q. For watching over the cargo on the dock?

A. Yes, sir.

Q. Do you have anything to do with loading the cargo on board the steamers?

A. Under the captain's supervision, yes.

Q. What are your duties?

A. The freight, I receive from our New York office an engagement sheet of the cargo that is committed for the steamer, and I make out four copies; I also draw a rough plan of the cargo that is committed for the ship, one for the captain, one for the chief officer, one for the stevedore and one for myself and when the steamer arrives I go aboard and give the captain a list of the cargo that has been received or committed for the steamer and also give him the rough plan, and he calls the chief officer, and between the chief officer, the captain and myself, he lays out the cargo for the lower holds, for the stability of the ship; I take the stevedore's plan and my own and make the corrections on them with the captain's directions, and turn them over to the stevedore.

[fol. 449] Q. Have you any authority over the captain?

A. Oh, no.

Q. Can you tell the captain where you want certain things stowed?

A. No; he tells me.

By the Court:

Q. You don't mean the lower hold?

A. The captain doesn't lay out every package that comes for the ship, a package of shoes or soap, that is general cargo; it is for heavy cargo, lead or copper.

Q. Do you only consult him about what is to go in the lower holds?

A. And on the decks also; we lay out cargo for the lower holds whichever is heaviest, and he puts general cargo in No. 3 holds, and I will mark that on my plan and work according to his directions.

By Mr. Keating:

Q. What have you to do with coal?

A. Coal—nothing, only order the coal gotten when the ship is ready to take the coal, call the man up on the 'phone, and he comes down.

Q. Do you select the place to put the coal?

A. No.

Q. Who selects that?

A. That is done by the captain and the engineer.

Q. Have you any authority as to where the coal is to be placed?

A. No, sir, it is not my duty.

Q. Do you know anything about coal, Mr. Hicks?

A. Nothing.

Q. Now, prior to June, 1926, did the vessels of the Ellerman's Wilson Line take their coal here for the round, or somewheres else?

A. Prior to June, the "Galileo" voyage?

[fol. 450] Q. Yes.

A. No, they took their coal on the other side.

Q. And when the "Galileo" arrived here in June what did you have to do with the coal that was put in No. 3 between decks and No. 2 shelter decks?

A. The new coal?

Q. Yes.

A. I had nothing to do with the coal, putting it in.

Q. Did you order the hold trimmers?

A. I ordered the coal gang, as we call it.

Q. Who did you get orders from to order the coal gang? Did you get any such orders?

A. Except when the captain was ready to put the coal in, I ordered the coal gang.

Q. Did anyone tell you where the coal was to go?

A. The captain told me where he wanted the coal to go; when the grain was loaded in the No. 3 hold, I asked him if he wanted the coal to go on those.

Q. Did he say where it was to go?

A. Yes, No. 3 between deck, No. 3 hold, and in between spaces.

Q. The head of the coal gang reports to the chief engineer?

A. Mr. Magarelli, who was here this morning, reports to the engineer.

Q. Does he take his orders from him?

A. Yes, he takes orders, whatever he tells him is to go in the other decks.

Q. When the vessel arrived back here in August, 1926, I think it was the 17th of August, did you have anything to do with the coal at that time?

A. No, sir.

Q. What orders did you get with respect to the coal, if any?

A. Oh, I don't know as I got any orders.

Q. Did the captain tell you where to put the coal that went in in August?

A. Surely.

[fol. 451] Q. Where did he tell you to put it?

A. 3 between deck and shelter deck.

Q. And it was put in there, was it?

A. Yes, sir.

Q. To whom did Magarelli, the coal foreman, report in August, 1926?

A. The chief engineer.

Q. And take his instructions?

A. Oh, yes, at all times.

Q. Now, Mr. Hicks, these two exhibits, E and F, are they made up on the pier?

A. Yes, sir, they are made by my assistant, Mr. Muller.

Q. What is done with them?

A. The writing is taken aboard for the chief engineer to fill in.

Q. Where are those filled in, do you know?

A. The day the ship leaves or the day before.

Q. And what is then done with them?

A. They are sent to our New York office.

Q. Did anyone from the shore, as far as you know, give any instructions to the captain or the chief engineer as to where to put the coal?

A. No, sir.

Cross-examination.

By Mr. Jones:

Q. Mr. Hicks, do you work for anybody other than Ellerman's Wilson Line, New York, Inc.?

A. Do you mean now?

Q. I am not interested about now—in August, 1926?

A. I worked for the Ellerman's Wilson Line.

Q. Were you paid by the Ellerman's Wilson Line, Hull, or Ellerman's Wilson Line, New York, Inc.?

A. New York.

Q. Did you get paid in cash or by check?

A. I make the payroll up——

Q. Does it come from Hull?

A. No, I make the payroll out and take it to the New [fol. 452] York office, and it comes back in envelopes.

Q. And your salary comes back in cash?

A. Yes, sir, from the New York office.

Q. You don't know where the money comes from, whether from Ellerman's Wilson Line, Ltd., Hull, or Ellerman's Wilson Line, New York, Inc.?

A. It comes from the New York office; it is on a New York bank.

Q. All you know is you get a certain amount of cash sent you by a messenger from the New York office?

A. Exactly.

Q. I tried to follow you in giving your evidence, and I got a little mixed up. I understood you to say that you made out the stowage plan before the ship arrived, then you would go aboard the ship and show it to the captain, and if he wanted to make any changes, he would show the changes to be made?

A. Not before the ship arrives; I make it out the day the ship comes there or maybe the day before, I may make it out Thursday afternoon and the ship arrives Friday, or I may make it out Friday before I go aboard the steamer.

Q. Now, so I can be quite certain what your evidence is, I show you Exhibit No. 13 and ask you whether or not you made this plan up?

A. No, sir, I did not.

Q. Did you make a copy of it up?

A. No, sir; that is made up by my assistant, Mr. Muller.

Q. Was it made up under your supervision?

A. No, I made mine up on a yellow piece of paper.

Q. Where does he get it?

A. He makes it up as the ship is loading.

Q. Where is the yellow paper?

A. This is a copy of it.

[fol. 453] Q. Have you the original that you made up on yellow paper that you told me about?

A. No.

Q. You threw it away?

A. It is not made in this form at all.

Q. How is that made?

A. I will show you if you will give me a piece of paper.

Q. (A piece of paper is handed to the witness.)

A. I am just giving you an idea.

Q. That is what we want.

A. The next steamer may not be like this at all, it may be a grain ship.

Q. We understand.

A. That is a rough sort of a way.

Q. Now, what you did then is to put holds——

Mr. Jones: I ask that this be marked in evidence.

(The paper is marked Exhibit 24 of this date.)

Q. Now I show you Exhibit 24, which you have just prepared to indicate how you prepare the plan, and you have written the words "Holds, 1, grain, 2, grain, 3, grain"; I suppose you mean by that lower holds?

A. Exactly.

Q. And then you have "4 oil", that means lower hold No. 4 used for oil?

A. Yes.

Q. "5 grain lower hold"; that means No. 5 was used for grain?

A. Yes.

Q. And No. 6 used for grain?

A. Yes, sir.

Q. And between decks No. 1, provisions, No. 2, general cargo, No. 3 general cargo?

A. Exactly.

Q. No. 4, provisions?

A. Yes.

Q. No. 5, provisions, No. 6 provisions?

A. Exactly, yes.

[fol. 454] Q. Now, what are those provisions?

A. Well, that could be lard or it could be bacon; we take considerable bacon and lard.

Q. That doesn't mean for consumption aboard ship, does it?

A. No, that is cargo; this is an illustration.

Q. And what do you do with the shelter deck?

A. I put maybe general cargo, and if it is apple season, I may put apples there.

Q. And you make up then a list similar to this one?

A. A rough list.

Q. Similar to Exhibit 24, the only change being that you would have something here for shelter deck, and fill out what you had for the shelter deck and give it to the captain?

A. Yes.

Q. And after you have shown it to the captain, if he makes any criticism of your list, you correct it accordingly?

A. He takes it and makes whatever alterations he wants.

Q. Did you do that in the case of the "Galileo" on the August voyage in 1926?

A. I presume I did.

Q. To the best of your recollection you did it?

A. I think I did.

Q. Who orders the lighters and the trucks, and so forth, to come to your pier?

A. Who orders the trucks to our pier?

Q. Yes.

A. They are not ordered, they are delivered according to their permits; if they have a permit to deliver on the 10th of the month, they deliver then.

Q. You can't put on your pier the entire cargo of a ship at one time?

A. No.

Q. The pier isn't big enough to hold it?

A. No.

Q. There must be some orderly method of getting cargo on your pier so you can get it on your ship?

A. Exactly.

[fol. 455] Q. And it must come there either by one or two conveyances, either by land or water?

A. Yes, sir.

Q. Now, the land conveyances are trucks and railway cars. Do any railway cars come on your pier?

A. Not on the pier, just outside of it.

Q. And the water conveyances are what we call lighters?

A. Lighters, exactly.

Q. Now, there must be some method of getting those lighters to your pier and the trucks and railway cars to your pier to avoid congestion?

A. Yes, sir.

Q. And if all the shippers just act on their own volition as to ordering cargo to go to you, it would mean that you would be overwhelmed and things would go helter-skelter?

A. Yes, sir.

Q. So somebody must call up the shippers and direct them when and where to deliver, that is true, isn't it?

A. No, there is nobody on the pier to call up; they follow their permits.

Q. Who issues the permits?

A. At the New York office for the first or second or third of the month, and they deliver accordingly.

Q. Now, for a ship like the "Galileo" arriving on the 17th, when were the permits issued?

A. I don't know.

Q. Before she arrived?

A. They might permit small packages, truck freight, they may permit that for the first two or three days, and then they will permit the larger commodities, 2,000 bags of flour, or 200 tons of lead or copper, that wouldn't be ordered much lower.

Q. Are you consulted by the New York office about issuing these permits?

A. No; a good many of those permits are issued before the ship arrives.

Q. So neither you nor the ship's people have anything to do with issuing permits?

[fol. 456] A. I won't say that; the office may call me up and ask me when I would be ready to receive 100 tons of copper; I would try and give them a date as soon as possible; if the captain wants that down in No. 3 hold I would give that as soon as possible, when that hold would be empty, so the copper could be placed there, and if it was going to be ready for Wednesday, I would tell them Wednesday so a permit would be issued for that day.

Q. So if anyone is called up from the New York office you are the person who is called up?

A. Yes, sir.

By Mr. Keating:

Q. Mr. Hicks, you have given us a list of cargo, to give us a typical example, is that correct, that is Exhibit 24?

A. Yes, sir.

Q. Do you make up a similar list for the ship's stores and bunkers?

A. No, I have nothing to do with stores.

Q. You don't put on this rough list anything about coal?

A. No, sir, I have nothing to do with it.

Q. Mr. Hicks, do you remember these long steel pieces of cargo, I think there was testimony about them?

A. I remember them well, yes, sir.

Q. What do you remember about them?

A. If I remember right, they came from a Pennsylvania lighter and they took one off on the pier, and they were quite long, I thing about 60 feet, and the rest lay alongside of the steamer, and they were—I don't know whether it was the last day or the day before the last, they went aboard.

Q. Now, when did they come with reference to the finishing of the steamer, do you know when they were booked? [fol. 457] A. They came, it was either two or three days before the sailing of the steamer they arrived by a Pennsylvania lighter, I think, and the steel came down, I think 8 ton or 6 ton or 4 ton, I don't know the weight of them now, but when I saw the size of them I called up the New York office and asked them about the length of them, and they said they didn't know the length, and I told them it was 60 feet, and I didn't know whether the captain would be able to take them aboard, and they said if not, they would have to leave them on the pier, for they didn't know the measurement of the plates when they booked them.

JOHN H. NEALE recalled.

By Mr. Jones:

Q. Mr. Neale, I find a cable in the files which Mr. Keating has produced which was apparently received by you or your office on August 31, 1926, at 5:34 A. M., reading as follows: "Wilson Line, New York City. 'Galileo': Presume you have utilized Captain Isbister for technical advice. Anxiously awaiting further news." I ask you if that isn't a cable you received at the time that I mentioned, and look at the time and see if I have interpreted that correctly?

A. August 31st.

Q. At 5:34 A. M., that is correct, isn't it?

A. That is correct.

Q. And then there is a cable which you apparently sent in reply to that, in which you say, "Isbister and other expert report cost of repairs to steamer if and when raised

may exceed one hundred thousand dollars." Did I read that correctly?

[fol. 458] Mr. Keating: The whole cable, Mr. Jones, is about salvage.

Mr. Jones: Yes, I just want to connect up Captain Isbister.

Q. Do you see that down at the bottom there? I had trouble finding it myself.

A. Yes, sir.

Q. Now when was that cable sent? I don't see anything on it to indicate.

A. September 1, 1926.

Q. It was sent in code?

A. Yes, sir.

Q. And that is a translation of the code?

A. Yes, sir.

Q. And that is the reason no date appears on the translation?

A. Yes, sir.

Q. Now, apparently from the cable from the owners, "I presume you utilized Captain Isbister," it would indicate that Captain Isbister was commonly employed by you?

A. No, sir, he is not.

Q. Well, how do you explain the language that was used by the owners, "Presume you have used Captain Isbister"?

A. Captain Isbister is a director in Ellerman & Buckner, and undoubtedly in Hull they knew he was out here and they undoubtedly wanted some expert——

Q. You don't know whether it was Mr. Ellermans, but there is a gentleman named John Ellermans who owns all these Ellermans' companies?

A. Sir John Ellermans.

Q. He is a controlling factor?

A. I don't think he owns a controlling share.

Mr. Keating: In what company?

The Witness: Ellerman & Bucknall.

Q. He is the sole owner of Ellerman's Wilson Line?

A. He is the sole owner of Ellerman's Wilson Line.

[fol. 459] Q. And he has a very potent voice in Ellerman

& Bucknall, and I suppose it was that potent voice that spoke when he said, "Presume you used Captain Isbister"?

A. It sounds possible.

Q. You know, don't you, that if you store coal on top of steel plates it causes dampness and corrosion to the plates?

A. No, sir, I don't.

Q. You don't know anything about that?

A. No, sir.

JOHN S. HECK, being duly sworn and examined as a witness for the respondent, testifies:

Direct examination.

By Mr. Keating:

Q. Mr. Heck, what is your position in life?

A. Surveyor for Lloyds Register. I am known as the senior engineer surveyor of the New York office.

Q. Of Lloyds Register of Shipping?

A. Of Lloyds Register of Shipping.

Q. And what is Lloyds Register of Shipping?

A. The shortest words I can use, it is an institution for the classification of ships. It has other objects, but that is the main one.

Q. It issues certificates regarding their seaworthiness, does it?

A. Regarding their strength and seaworthiness, yes, sir. Seaworthiness is only limited to their strength and safety.

Q. Has it any connection with any steamship company or insurance company, or anything of that sort?

A. No, sir, it is entirely independent.

Q. It is an independent organization?

A. It is an independent organization, and makes no profits.

Q. Now, Mr. Heck, will you please state to the Court [fol. 460] your experience, your general experience as an engineer on board ships? Start at the beginning and tell the Court just how you acquired your knowledge which has led up to your being the chief engineer surveyor for Lloyds in New York?

A. Well, I have been intimately connected with ships all my life and started going to sea at 9 years old, but my first serious connection with shipping would be in 1895. At that time I made a long voyage, just after leaving school, in the fall of 1895. Next I served an engineering apprenticeship, and I spent four years building engines. Then I spent four years in the drawing offices, designing them, approximately four years. I was those four years approximately at sea as an engineer of sea-going vessels.

Q. Were they coal burners?

A. All coal burners. And in May, 1907, I was appointed a surveyor to Lloyds Register, and I have been there ever since.

Q. How many years' experience have you had surveying ships for Lloyds in New York?

A. Well, that is rather difficult; in New York somewhere between 6 and 8, approximately 7 years.

Q. And where prior to that were you?

A. I was stationed first in Glasgow.

Q. As a surveyor?

A. As a surveyor. Next in Hull; next in Pittsburgh; next in Cleveland; a short term in New York, a temporary term. Then I was in Boston for approximately 9 years, and I have been now in New York approximately 6 or 7 years, I am not quite certain.

Q. And during that time how many ships do you suppose you have gone aboard?

A. Oh, it must be in the thousands, Mr. Keating; I suppose I averaged 300 ships a year for 23 years, so somewhere between five and ten thousand.

[fol. 461] Q. Now, Mr. Heck, I show you the builder's plan of the steamer "Galileo", which is Exhibit 18, together with Exhibits 10, 11 and 12, being certain sketches of the steamer drawn approximately to scale, and I ask you to assume the following facts:

1. That the steamship "Galileo" is a steel cargo vessel of about 4100 registered net tonnage, having three decks and six holds, each hold being divided into a lower hold, a tween deck and a shelter deck;

2. That No. 3 tween deck compartment, located on the tween deck forward of the permanent bunker space and aft

of the No. 2 tween deck, is a compartment approximately 33 feet long, 50 feet wide and 10 feet high;

3. That the sides, bottom and top of No. 3 tween deck are steel, the forward end consisting of a bulkhead constructed of plan-s, wooden planks, about 10 inches wide and 3 inches thick, running vertically from the top of the compartment to the floor and held in place or fitted into grooves composed of sills or pieces of wood about 10 inches wide and about 6 inches high placed against the bottom and top of the bulkhead on each side; that the edges of each plank are planed and fitted closely together; that over each seam where the planks come together strips of wood or battens about 3 inches wide and about ¼ of an inch thick were nailed on both sides of the bulkhead, wire nails were used, the nails on each side of the batten being about one inch apart; that there were also made fast to the No. 2 tween deck side two or more separation cloths somewhat larger than an ordi- [fol. 462] nary hatch tarpaulin, made of material somewhat similar to bagging, although heavier and of a closer texture, which were attached to the bulkhead at the top by placing a batten outside of the separation cloth and nailing it against the bulkhead; that where the separation cloths overlapped a batten was nailed vertically over the separation cloths against the bulkhead to join them together, the battens being similar to those used on the seams of the bulkhead; that this bulkhead ran to each side to the shell plating of the steamer;

4. That the after end of No. 3 tween deck consisted of a bulkhead made of steel in the way of the hatch hereinafter referred to; that this after bulkhead in the wings was constructed of planks of the same description as the forward bulkhead with batters nailed over the place on each side where the planks came together in the same way as battens on the forward bulkhead, except that in the case of the after bulkhead the planks ran horizontally instead of vertically, that there were not any separation cloths attached to it and there was a door constructed in it on each side leading to the tween deck cross bunker; that through the top and bottom of this compartment, being the shelter and tween decks respectively, was a hatchway located in the middle of the ship about 18 feet wide running forward from

the steel bulkhead at the after end of the compartment approximately 15½ feet, thus making an opening approximately 15½ feet by 18 feet; that there was a grain feeder built of wood and full of grain running through the hatchways and through the compartment and built against the steel bulkhead extending from side to side of the hatchway [fol. 463] and running from the hatchway forward less than half the length of the hatchway already described; that this No. 3 tween deck compartment is ventilated by two telescopic ventilators which are located on either side of the hatchway 6-7 feet out from the side of the hatchway and about 23 feet aft of the forward bulkhead; that the openings of these ventilators into this compartment were approximately 12 to 14 inches in diameter;

5. That No. 3 lower hold was filled with grain and the hatch over No. 3 tween deck was covered with hatches and that two tarpaulins were battened down over it. Assuming all of these facts will you state whether or not in your opinion No. 3 tween deck was a proper and safe compartment in which to load and carry bunker coal?

Mr. Jones: Does it say that the bunker was not air-tight?

Mr. Keating: I don't think I said that, but I will put that in.

A. Assuming that the bulkhead was not air-tight?

Q. Can you state whether or not No. 3 between deck was in your opinion a safe and proper compartment in which to load and carry coal?

A. Yes, sir, I can. In my opinion that arrangement was a safe and proper way in accordance with good steamship practice. There are many ships at the present day carrying such an arrangement. In fact, I might say that almost every large freighter burning coal making a long voyage has a similar arrangement, a great number, at any rate.

Q. You have seen that yourself?

A. I have seen it this morning, Mr. Keating.

[fol. 464] Q. You have seen it this morning?

A. The last ship before I came here I saw the same arrangement exactly.

By the Court:

Q. Well, in classifying ships for this Lloyds Bureau would you have to take into account such an arrangement as that, or does your classification deal with things other than arrangements such as this for temporary bunkers?

A. No, sir, we would not take it into consideration in classifying the ship. There is a minimum number of watertight bulkheads which is required; if there is that minimum number on a ship we classify it.

Q. So it hasn't ever been part of your official duties to pass on the safety of this sort of an arrangement, has it?

A. No, sir, I am merely stating my opinion.

By Mr. Keating:

Q. Now, Mr. Heck, assume in addition to the facts contained in the hypothetical question already stated to you the following facts:

1. That on August 25, 1926, there remained about 160 tons of coal out of 360 tons of Morrisdale coal which had been put into this No. 3 tween deck compartment on June 30, 1926, and that the 160 tons of coal which remained were in a pile against the forward bulkhead running up to within 3 feet of the top of the compartment and sloping aft to about 3 feet forward of the forward hatch coaming and slanting down from the sides of the ship to close to the sides of the hatch coaming.

[fol. 465] 2. That upon careful inspection by the chief engineer before loading any additional coal the 160 tons of coal remaining were found to be cool and showed no signs of heating; will you say whether or not it would be a safe and prudent thing to load an additional 200 tons of Morrisdale coal on top of the coal remaining since June 30th, assuming that all the coal in No. 3 'tween deck would be discharged from the steamer within 16 days or shortly thereafter?

Mr. Jones: I object, if your Honor please, as not in accordance with the evidence. The chief engineer, as I take it, has now confessed to the fact that the coal was not cool.

Mr. Keating: That is quite true, your Honor, but one of the issues raised by Mr. Jones was that it was negligence to take any coal in there in any condition.

Mr. Jones: I agree and I think I am right.
The Court: The objection is overruled with exception.

Q. Do you understand the question, Mr. Heck?
A. I think I do, Mr. Keating. I should say that the whole responsibility was the chief engineer's; if he decided that the coal was safe, then he was justified; he may have made an error of judgment, but he did not make an error of negligence.

Mr. Jones: I move to strike it out as not responsive.
The Court: Strike it out, with exception.

[fol. 466] Q. The question, Mr. Heck, is this: Can you say whether or not it would be a safe and prudent thing to load an additional 200 tons of Morrisdale coal on top of the coal remaining since June 30th, assuming that all the coal in the between decks would be discharged from the steamer within 16 days, or shortly thereafter?
A. Well, that would all depend on the state of the old coal, Mr. Keating, as I tried to say before.
Q. I am asking you to assume that it was cool.
A. That it was cool and inspected by a competent man?
Q. Yes.
A. Then it was a reasonable and safe thing to do. It was proved commercially that it was not safe in this instance.

By the Court:

Q. What experience have you had in handling coal?
A. I was actual engineer at sea from 4 to 5 years.
Q. That was a good many years ago?
A. That was from 1903 to 1907.
Q. Have you had any contact with such a problem as this since 1907?
A. Oh, yes, sir.
Q. In what connection?
A. I was a surveyor, having been called in in such an actual case, the heating of coal.
Q. As a surveyor do you ever have to determine whether it is safe to put coal in a place?
A. Yes, sir, to leave the coal in. May I recite the last case?
Q. No, don't go into particular cases. You see, I have got to weigh your testimony. Now, if you are doing this

sort of work, determining whether coal was safe under certain circumstances, your testimony would have more weight [fol. 467] than if you haven't had any more experience since 1907. Now, if you can tell me generally, not specific cases, what you have done on problems of that sort, how constantly you have had to deal with that since 1907——

A. I can remember about four cases since 1918; there may be more.

Q. Those were only cases where you had surveyed damage?

A. No, sir, where the coal had heated and I had to take the responsibility of issuing a certificate for the——

Q. It was for you to determine it was safe to put coal in?

A. No, sir, whether it was safe or not to take it out. This coal was in the bunkers already in each case.

Q. Whether it was safe to take the coal out of the bunkers?

A. No, whether it was safe to let the ship proceed with that particular coal in the bunkers.

Q. That was four times you did that?

A. Yes, that I can remember. I remember that very clearly.

Q. Did the owner apply to you for your advice?

A. Yes, sir, the owner's representative.

Q. Did they involve wooden bulkheads too?

A. Yes.

Q. How are wooden bulkheads usually made? Are they usually made in this fashion or are they made in another fashion?

A In which fashion?

Q. As described in this question?

A. Yes, that is a very common way of making them in between decks particularly, a very common way.

Q. Well, would you from your knowledge of shipping think there was a safer way of making a bulkhead?

A. Yes, sir, there is always a safer way.

Q. What else could they have done?

[fol. 468] A. They could have made it very much stronger, sir, they could have first of all bolted the steel beams on the deck, then carried strong uprights to the beams.

Q. You have just in mind strengthening it?

A. Strengthening it and making it double sheathed.

Q. Sheathed with metal?

A. No, three thicknesses of wood.

Q. What is the advantage of that?

A. You close up any crevices.

Q. Do they ever caulk it?

A. Not a portable bulkhead of that nature, but only a very rough separation; the one I saw this morning had paper pasted over it.

Q. Paper would exclude the air better than this?

A. Paper pasted on doubtless would be about as good a thing as you could do.

Q. You say you sometimes double sheath it. In about what percentage of the cases do they use double sheathing, if they are going to store coal any place?

A. That would only be where they intended it for long charter, for a term of years; that wouldn't be done for an ordinary single voyage, it wouldn't warrant the expense.

Q. Is it frequently the case that permanent bunkers have this sort of wooden bulkhead?

A. Bunkers which have lasted for many years, sir, it depends on what the meaning of the term bunker is, but in practically every bunker one bulkhead is not air-tight; only one bulkhead of the bunker is air-tight.

Q. But that, I suppose, is the bulkhead against which they pile the coal, is it?

A. I know in the case of this class bunker here, sir, referring to the plan, one of these would be a water-tight bulkhead, and they will be perfectly tight; the other one will [fol. 469] consist of steel plates riveted together and not caulked. So assuming that this is a water-tight bulkhead, I see it is so marked, assuming that that is a water-tight bulkhead, a certain amount of air can seep through that bulkhead.

By Mr. Keating:

Q. Mr. Heck, assuming all the facts that I stated in both those hypothetical questions, can you state whether or not it is usual and customary in the Port of New York to load coal on other ships similar to the "Galileo" in similar places to No. 3 between deck of the "Galileo", as described by you?

Mr. Jones: I object on the grounds stated in my previous objection directed to questions of this character. You may

remember, your Honor, I enumerated five different grounds of objection to this, and you overruled it and gave an exception.

The Court: Overruled with exception.

A. I have seen it loaded in similar places; I cannot say that I have seen it loaded in that exact place.

The Court: Of course, that doesn't answer the question at all; I don't know whether you want an answer or not.

Q. Let me ask you the question again: Assuming all the facts stated in both hypothetical questions, that is, all the facts I have asked you to assume, can you state whether or not it is usual and customary in the Port of New York to [fol. 470] load coal on other ships in similar places to the No. 3 between deck of the "Galileo", as described by you?

Mr. Jones: My objection stands to these questions without the necessity of repeating it.

The Court: Yes.

A. I can only say that I have seen it loaded in similar places.

By the Court:

Q. You haven't seen it often enough to say that it is customary?

A. No, sir, it is not my duty. I am hard worked without exercising that function.

By Mr. Keating:

Q. Now, Mr. Heck, have you seen in the course of your experience a small or a large number of ships with permanent bunkers?

A. Oh, yes, sir, a great many.

Q. Have you seen a ship's bunker that was airtight?

A. No, sir. It is practically impossible to build a coal bunker which will be absolutely airtight. You must take in coal at the top and you must take it out at the bottom, and somewhere between those two openings there is room for a circulation of air into that coal.

Q. Is that true of every ship's bunker that you have seen?

A. Yes, I can say it is every ship's coal bunker.

Q. Now, what have you to say about the position of the

No. 3 between decks as I have described it to you, as regards [fol. 471] its accessibility to heat?

A. I should say the forward end is quite a good distance from any source of heat; the after end is fairly close.

Q. Do you know whether it is one of the causes of spontaneous combustion in coal?

A. Yes, it is one—now, I am going on other people's authority; to the best of my knowledge it is one of the determining factors whether coal will heat or not.

Q. Do you know the purpose of having ventilators over a coal bunker?

A. On top of the coal?

Q. Yes.

A. To carry off the explosive gases which are formed.

Q. Have they any other purpose?

A. No, sir, except to provide air for the men who must work in those bunkers.

Q. Now, a telescopic style of ventilator—where is the opening into the compartment for that ventilator, that type of ventilator?

A. In the between deck; it would be an annular opening around a vent which went to the lower hold.

Q. Is there any ventilation from the bottom in such a ventilator, to the bottom of the hold? Is the opening in the ventilator at the top or the bottom of the compartment?

A. At the top.

Q. There is no opening at the bottom of the compartment in a telescopic ventilator, is there?

A. No.

Q. Mr. Heck, from your experience is there any objection in your mind to loading a fresh supply of coal on old coal in the bunker where the examination has shown that the old coal is cool?

A. No, sir. We have to deal with ships commercially. It is constantly done. It would be of course very desirable [fol. 472] if you could never load any coal on top of any other coal, but it is not practicable in the operation of ships.

Q. Whose duty is it to determine whether any old coal is cool?

A. Whoever is in charge of the vessel; usually the chief engineer.

Q. And is it his duty to make an inspection?

A. Oh, yes, undoubtedly, undoubtedly.

Q. Now, is there anything that ought to be done with the old coal if new coal is put on top of it with respect to attempting to get it used up first, or anything of that sort?

A. Not necessarily; it would depend on the condition in which the engineer found the old coal.

Q. Assume he found the old coal cool and not heated, ought he to place that old coal in a position where it would be used up first?

A. That would all depend on circumstances, Mr. Keating. It would be very desirable if he did so; we wouldn't be trying out this case if he had done it in this instance, but it isn't absolutely necessary.

Q. Mr. Heck, do you know whether in coal spontaneous combustion is confined to any particular grade or age of coal on ships?

A. No, sir; the extent of my reading is that any class of coal may heat spontaneously.

Q. Mr. Heck, are you familiar with Mr. Milton's Bulletin, Exhibit No. 16?

A. Yes, sir, I am familiar with it. It is a good many years ago, but I am familiar with it, I received a copy of it when it was issued.

Q. I observe on page 17 of Exhibit 16 that Mr. Milton made the following statement: "8. If any coal is left in a bunker when a fresh charge has to be taken in, it should be trimmed into a position to ensure its being used on the next voyage. It cannot be too strongly impressed upon those [fol. 473] responsible that danger of overheating and spontaneous combustion increases with the length of time the coal remains in the ship." Do you agree with that?

A. Yes, that is quite correct, but it must be read with care, Mr. Keating. He doesn't mention what length of voyage he has in mind. May I give an example of that?

Q. Yes.

A. Let us take the English Channel, steamers from Dover to Calais, they make a voyage of one hour, and I don't think Mr. Milton would want them to strip out every voyage in that case.

Q. In other words, it depends a good deal on the length of the next voyage?

A. It depends on the length of the next voyage, yes, sir. I think you put that in the hypothetical question.

Cross-examination.

By Mr. Jones:

Q. Mr. Heck, I assume that you recognize that Mr. Milton was one of the authorities recognized by your Society on this subject of spontaneous combustion?

A. Oh, yes, he was a great authority.

Q. And you wouldn't advance your opinion in opposition to Mr. Milton's, would you?

A. Oh, yes, I would if I thought I was right, Mr. Jones.

Q. Don't you know that Lloyds Calendar has published a summary of Mr. Milton's recommendations and observations for every year since he got out this pamphlet?

A. Yes, sir, that was a classic.

Q. That is classic?

A. Yes.

Q. Mr. Milton said, in addition to that matter which was read to you by Mr. Keating: "Where bunkers are over gutterways, &c., special care should be taken that the limbers are tight. Several fires have originated in bunkers just [fol. 474] over the limbers, and there is reason to suppose that they have been caused by air circulating through the coal and coming from the limbers." Do you agree with that?

A. Yes, sir, that is just what I told Mr. Keating; no bunker is air-tight.

Q. No bunker is air-tight, and you agree that those limbers should be plugged up and made air-tight?

A. I should say that it would be a very desirable thing to do. It is not done.

Q. Not to do it is a dangerous practice, isn't it?

A. Not necessarily, sir.

Q. Well, you know that fires are likely to occur when you don't do it?

A. There are thousands of voyages made when there are no fires. The question as to the number of voyages which have a fire and the number of voyages which don't——

Q. You know, don't you, Mr. Heck, that this whole subject became a matter of active investigation because of the large number of fires?

A. The increasing number of fires, Mr. Jones.

Q. The increasing number of fires?

A. Yes.

Q. And it was to avoid the increasing number of fires if I may use your language, that these recommendations were made; isn't that true?

A. Yes.

Q. And it was recognized that there was a serious cause of danger which ship owners were neglecting, that is true, isn't it?

A. I do not know.

Q. Can you assign any reason for your Society going to the trouble of having Mr. Milton make this very learned report and have the publication of that report in Lloyds Calendar, which I assume was circulated among all ship owners as well as cargo owners, wasn't it?

A. My employers have nothing to do with Lloyds Calendar.

[fol. 475] Q. It is published by Lloyds of London?

A. Yes.

Q. And generally circulated among ship owners, isn't it?

A. Yes, sir.

Q. Can you assign any reason for the publication of that year by year for a long period of years except that it was recognized that ship owners were neglecting a precaution that they should not neglect?

A. No, I don't say that, for I have no knowledge, and furthermore, I don't know that the ship owners were neglectful, not deliberately neglectful.

Q. Let me call your attention to Exhibit 17, an official publication of the British Board of Trade—examine it and tell me whether or not what I said is true or untrue?

A. Which particular point?

Q. I am not asking you about any point at all. You recognize that as an official publication of the Board of Trade, do you not?

A. Yes, sir, it is a circular of the British Board of Trade.

Q. Now I call your attention to the following: "Ventilation into a mass of coal is prohibited. It should be carefully borne in mind that spontaneous combustion in coal cargoes is due to causes entirely distinct from the giving off of gases referred to above. Spontaneous combustion is promoted by the introduction of air into a mass of coal, and

for that reason surveyors should not accept any arrangement of ventilators which would deliver air into the body of the coals stowed in any compartment." Do you agree with that?

A. Right.

Q. Then: "Arrangement and area of ventilator orifices. Each hold or 'tween deck compartment in which coal is carried should be provided with at least two ventilators, one [fol. 476] for inlet and the other for outlet. They should be of about the same size and placed at the opposite ends of the compartment or as far apart as practicable." Do you agree with that?

A. That is a recommendation of the Board of Trade; I can't do anything else but agree with it.

Q. You know that the fore and aft are either ends of a compartment or in the ends of a ship. You don't refer to the side of the ship as an end of the compartment, do you?

A. I think you are rather dealing just with words there.

Q. No, I am not at all. I ask you as a ship surveyor when you speak of the end of a compartment, what do you mean?

A. I should qualify it; I should say the forward end and the aft end.

Q. Did you ever hear of the word end being used by any person who has anything to do with ships unless he meant the forward or after end?

A. I think not, no, sir.

Q. Now I will read you a passage from Exhibit No. 19, referred to by Mr. Keating, published by the Department of the Interior, Bureau of Mines:

"If air could be totally excluded, there would be no self-heating and no combustion." Do you agree with that?

A. Yes, sir. I would like to qualify that.

Q. How would you like to qualify it?

A. That in a ship's bunkers, as I answered Mr. Keating, you cannot exclude air altogether, the circulation, you would have to carry your coal either in an air-tight tank or in a submarine, which can be sealed hermetically.

Q. You mean to say you can't build an air-tight bulkhead?

A. Yes, sir, I can build an air-tight bulkhead, but I cannot [fol. 477] for a commercial ship build an air-eight compartment unless you will allow me to build one of those two

types of ship, which wouldn't be very suitable for carrying coal.

Q. A steel bulkhead can be made air-tight, can it?

A. Yes, sir.

Q. And you were telling his Honor about putting paper over a wooden bulkhead to make it air-tight?

A. Yes, sir.

Q. In fact, it is a very easy thing to do, isn't it?

A. Yes, sir.

Q. And it is not an un-sual thing to do, is it? You have seen it in many ships?

A. Are you referring to a steel or wood bulkhead?

Q. Wood.

A. I have seen it in many ships.

By the Court:

Q. Referring to a wood bulkhead with paper over it——

A. With paper or cleats, but some kind of cloth over it to cover up the seams.

Q. He is asking you about the paper on wood bulkheads.

A. No, sir, the paper this morning struck me as rather unusual.

Q. By cleats you mean battens?

A. Wood battens 2 or 3 inches wide.

By Mr. Jones:

Q. You have also seen shiplap used?

A. Yes, sir, and tongued and grooved.

Q. By shiplap you mean that that is a groove cut—do you want to draw a picture and show what the shiplap is?

The Court: Tongued and grooved?

[fol. 478] Mr. Jones: Shiplap is a little different.

(The witness draws a picture.)

By the Court:

Q. This would be more effective, shiplap, than battens, wouldn't it?

A. Yes, sir, it would be better.

Q. Tongued and grooved would be better than battened, too, wouldn't it?

A. Tongued and grooved would be stronger, sir. I don't believe that it would be any more air-tight, it would be a better job.

By Mr. Jones:

Q. The use of battens is one of the poorest methods, isn't it, as far as keeping the bulkhead air-tight is concerned?

A. It isn't as strong as the other things, it is more liable to become damaged.

Q. I am just thinking of it being air-tight.

A. Provided the battened bulkhead is in good condition it is just as air-tight as the other.

Q. Just as air-tight as the shiplap?

A. As shiplap or the tongued and grooved.

Q. It isn't as air-tight, of course, as a steel bulkhead?

A. I can see that a good wood bulkhead would pass no more air than a non-water-tight steel bulkhead, and no steel water-tight bulkhead would be fitted in such a position as that.

The sketch made by the witness is offered in evidence.

(It is marked Exhibit 25 of this date.)

[fol. 479] By the Court:

Q. These bulkheads that have paper over the cracks are not battened, are they, that is, it is either shiplap or tongued and grooved?

A. I couldn't say, sir; I didn't examine it very closely. I was rather hurrying my job to come here this afternoon, and I didn't examine it very closely.

By Mr. Jones:

Q. Now, Mr. Heck, where you lay beams of wood on the floor or deck of a vessel there is necessarily underneath those beams where you have the places, where the deck plates are joined, passages through which air can come unless you close those passages, aren't there?

A. Why, exactly, unless you close them up.

Q. Now, Mr. Heck, I call your attention to another recommendation of Mr. Milton, No. 5——

A. I have tried to follow them out for 20 years, Mr. Jones——

Q. Please don't interrupt me—where Mr. Milton makes this recommendation: "To minimize the absorption of oxygen by coal in the reserve bunkers, or in any bunker in which men are not actually working, the lower doors should be kept absolutely closed so as to prevent any current of air whatever passing through the bunker into the mass of coal." Do you agree with that?

A. No, sir; that is a very fine thing, but Mr. Milton used the term "Absolutely closed"; it is absolutely impossible to do that, with all due respect.

Q. Do you mean to say that a bunker which is not being actually used can't be kept absolutely closed?

A. It can be done, but not on an ordinary ship.

[fol. 480] Q. Why not?

A. Can I sketch the ordinary bunker door?

Q. You may, but I don't see why you can't shut a door and shut it tightly.

A. These doors are not like the doors you have in mind.

Mr. Jones: Mr. Heck has made a sketch which consists of a line which is somewhat wavy; at one end I put A and the other B; he has then drawn two frames, by each of which I will put the letter C, and he has drawn a line parallel to the line A-B, which I will mark D-E. Then he has drawn a figure which somewhat resembles an hour-glass to represent the opening into the bunker. Now, have I correctly described that?

The Witness: Yes, very good, Mr. Jones.

Q. Now, Mr. Heck, proceed with your explanation.

A. To start, those things are only rough, they are steel castings forged by a blacksmith; the plate is a ship's plate; the fireman's method of opening that door, he pounds it very vigorously with a heavy hammer to shake it free; he then inserts a long steel poker known as a slice underneath that, and he lifts it up with that in a very short time. That door is a very rough, very bent object, which could not be made water-tight.

Q. Then, Mr. Heck, don't you know that Mr. Milton knew all about those contraptions by going in and out of these bulkheads, and that Mr. Milton, having all those things in mind, made this positive recommendation, that is quite obvious, isn't it, and you were sent, as one of Lloyd's surveyors, one of these pamphlets similar to Ex-

[fol. 481] hibit No. 16, and you were directed to proceed accordingly, were you not?

Mr. Keating: I object to the question for Mr. Jones has asked at least five questions in it, and I think the witness has only answered one. It is an unfair way to examine a witness. Make one question there.

The Court: Have you an answer to it? (To the stenographer.)

The Stenographer: There is no answer.

(The question is stricken out.)

Q. Did you or did you not receive an exact copy of Exhibit No. 16?

A. To the best of my recollection I did.

Q. Did you not receive instructions from your superiors in London to be guided by this copy of Exhibit No. 16 which you received?

A. I do not know.

Q. In the ordinary course of your operation are you or are you not guided by the documents similar to Exhibit 16 which are issued by your London superiors?

A. Yes, Mr. Jones, yes.

Q. And notwithstanding that fact, you would feel that you would disregard Mr. Milton's recommendation No. 5 contained in Exhibit No. 16?

A. That is not a fair question, sir; I cannot answer that question. At least one of Mr. Milton's recommendations is impossible, therefore I must only carry it out to the best of my practical judgment, as we do all our rules. The very word absolutely at once is impossible if you are going to hang on a word.

Q. Doors can be made water-tight, can't they?

A. Yes, sir.

[fol. 482] Q. Therefore they can be made air-tight?

A. I beg your pardon, I would like to qualify that; the type of door that I have sketched cannot be made water-tight.

Q. That is not the only type of door that you have used for bunkers, is it?

A. No, sir, but a water-tight door is only used when on a water-tight bulkhead.

Q. But it is entirely feasible to have a water-tight door, isn't it?

A. Of course, it is feasible; anything is feasible. It is a question of does the commercial practice warrant it. We can lock up poisonous gases and hold them absolutely safe, but we couldn't build ships that way, Mr. Jones.

Q. But you know that on cross bunkers on passenger ships you do have water-tight doors?

A. It depends on the passenger ship. You have them both on freighters and on passenger ships; it depends on the location of your water-tight bulkhead.

Q. You have then a bunker on both freight and passenger ships, not all bunkers and not all ships, but you have seen water-tight doors to bunkers on both freight and passenger ships?

A. Yes, sir.

By the Court:

Q. Water-tight doors to bunkers?

A. Where the bunker bulkhead is water-tight the bulkhead of the ship, those water-tight doors are fitted; when it is not the water-tight bunker of a ship those water-tight doors are not fitted.

By Mr. Jones:

Q. I show you Lloyds Calendar for 1926, which is printed and published by Lloyds Royal Exchange, London, in [fol. 483] 1926——

A. Incidentally, I have nothing to do with Lloyds Exchange, Mr. Jones; I am Lloyds Register.

Q. —and ask you whether or not Mr. Milton's recommendations are not published in Lloyds Calendar as shown there?

The Court: He has already stated this.

Mr. Jones: I would like to have it marked for identification.

The Witness: I can admit it is in 1929.

Q. And it goes back to 1912?

A. Yes, sir.

Q. Ever since Mr. Milton made his report?

A. Yes.

Q. And I believe you told me that this Calendar is in common circulation among all shipping men?

A. Oh, yes, a very well-known work.

Mr. Jones: It is considered a standard work?

(Lloyds Calendar, the last exhibit offered, is marked exhibit No. 26, of this date.)

Q. Now I notice on Mr. Milton's report as printed on the side in black type: "In recent cases length of voyage does not appear to be an important factor." Do you agree or disagree with that statement?

A. Well, he is referring to those particular cases; I don't know the cases that he had in mind, sir, so I cannot agree nor disagree.

Q. You wouldn't advance the opinion that the length of the voyage has anything to do with it?

A. Oh, yes, Mr. Milton said that himself in the last paragraph, that the longer the coal remains in the bunker, the [fol. 484] greater the danger, in his conclusions. He says it cannot be too strongly impressed on the engineers, and then it goes on.

The Court: I want to ask a question which you will think objectionable, so I note an exception in your behalf to it.

By the Court:

Q. About what percentage of the steamships have one of the bulkheads made of wood?

A. I couldn't answer that, sir. During the war there was a large number, a great many have been removed. Now I am speaking more particularly of the lower bunker.

Q. A great many have been removed because they were considered unsafe?

A. No, not because it was considered unsafe.

Q. Well, why did they go to the trouble and expense of removing the bulkhead and putting in a steel one?

A. Because in those days they had to carry a large amount of bunkers; this wasn't an extra one. Most of the American ships enlarged their bunkers during the war; they couldn't get coal on the other side, for the round trip, and they extended the bulkhead. Practically all the American coal-burning ships did that. And as to between decks here, I think I already stated to Mr. Keating that I think most large coal-burning freighters on long voyages have a similar arrangement.

Q. On long voyages—to South America, South Africa?

A. No, your Honor, longer than that; South Africa would be longer, but I have in mind the Far East.

[fol. 485] By Mr. Jones:

Q. Would you consider a voyage of two months a long voyage?

A. No, sir, I would consider that a moderate voyage.

Q. How long does a voyage to South Africa take?

A. About three weeks.

Q. You consider a three weeks' voyage to South Africa a long voyage, but not a three months' voyage?

A. I had in mind the round trip to South Africa, Mr. Jones, I didn't mean the one single voyage.

Q. I show you Exhibit No. 18, which is apparently the original arrangement of the ship, and ask you if this bulkhead which has been described to you by Mr. Keating appears on this exhibit?

A. There is a rough pencil mark here which I took for the bulkhead; it isn't on the original plan, but somebody has added it since.

Q. I then put the letter A at the top of the pencil mark and the letter B at the bottom, that is roughly in the place that Mr. Keating described, isn't it?

A. I don't know; Mr. Keating didn't describe it. I couldn't take the responsibility for saying it.

Q. You don't want this thing to be here at all, so I prefer to rub it out.

A. There must be some testimony as to where that bulkhead is.

Q. There is. Mr. Bagger showed definitely that he measured it and Mr. Bagger's testimony shows that it is between the 25th and 20th frame space, beginning from the boiler room bulkhead, which is marked frame 100, so it would be 125.

A. It would be 124.

Q. It was just abaft the ventilator?

A. Yes.

Q. That is in the upper between decks?

[fol. 486] A. The upper between decks or the shelter between decks.

Q. The shelter between decks, just abaft the ventilator?

A. On both decks.

Q. Now, on what they call the shelter deck space, what we call the upper between deck, and those in the lower between decks, which the ship's officer called the between decks, it is just forward of the twentieth frame or the one hundred and twentieth frame?

Mr. Jones: The witness has marked on the ship's plan two pencil marks, one in the shelter deck, where I put the letter A at the top of the line, and the letter B at the bottom; one in the between deck, I put the letter C at the top of the line and the letter D at the bottom of the line, which indicate the position of the wooden bulkheads at the forward end of the shelter deck and between deck spaces, respectively.

(These positions have been described to the witness by Mr. Jones from Mr. Bagger's sketch.)

Q. Now I ask you whether you have any record of your Society having approved those compartments with those two wooden bulkheads, the bulkhead A-B and C-D being inserted in the ship?

A. No, Lloyds Register would not pass on the position of that; that would be a question for the owner.

Q. You have nothing to do with that?

A. No, sir.

Q. Now, as I recall it, it has been testified here that this was a permanent bulkhead, and isn't it true that any per-
[fol. 487] manent change in the ship's structure must be called to your classification company's attention?

A. No, sir, that would be only anything involving the strength of the ship or her safety.

Q. Insertion of a bulkhead such as that affects the ventilating arrangement of the ship, doesn't it?

A. It probably would, yes, sir, it probably would.

Q. And it is your Society's duty to take cognizance of the ventilating arrangements of the holds, isn't that true?

A. To a certain extent, yes.

By the Court:

Q. Can you tell me, Mr. Heck, anything—this over the objection of the libelant—anything about the custom of closing the openings under the sills that support such a

wooden bulkhead as this? Do you understand what I mean by the sills?

A. Oh, yes.

Q. Now, you told me that normally there would be openings under them?

A. Yes, sir.

Q. Can you tell me anything about the custom in regard to filling up those openings?

A. In many cases it varies so much, your Honor, and in some cases they do not fill those up at all. In some cases a very careful ship owner will bolt them down and fit them down so there aren't any openings, and in some cases the openings will get plugged with dirt.

Q. Mere bolting down wouldn't be sufficient, would it? It wouldn't have any effect whatever, would it?

A. Bolting down, on red lead and putty, we make a paste with putty, if we desire to keep it very tight, and we can stop anything then.

[fol. 488] By Mr. Jones:

Q. It merely takes a little trouble to make it tight?

A. It all depends. We all vary, Mr. Jones. Some examiners are very easy and you have been very hard.

The Court: I don't think he has worried you an awful lot, Mr. Heck.

Mr. Jones: Mr. Heck evidently thinks I am a bad man. I simply call to your attention only what is recommended by your own Society in print, and you have taken exception to the recommendations of your own Society.

Adjourned to Tuesday, November 12, 1929, at 10:30 A. M.

New York, November 12, 1929.

Met pursuant to adjournment at 10:30 A. M. Present: As before.

HARRY A. HUFF, called as a witness on behalf of the respondent, having been duly sworn, testified as follows:

Direct examination.

By Mr. Keating:

Q. Mr. Huff, by whom are you employed?

A. Board of Underwriters of New York.

Q. And who are the Board of Underwriters of New York?

A. They are comprised of the chief marine insurance companies.

Q. Cargo insurance companies?

A. Cargo.

[fol. 489] Mr. Jones: I would like to cross examine this witness. I don't think he knows who the Board of Underwriters are. I think I know more than he does.

The Court: You may cross examine him just as soon as he is qualified and before he gives the substance of his testimony.

Q. Captain, how long have you been employed by the Board of Underwriters?

A. About five years and a half.

Q. In what capacity are you employed?

A. Surveyor.

Q. And in the capacity as surveyor what do you do?

A. Inspect the cargo of the ships.

Q. In New York?

A. In New York and New Jersey, Staten Island, wherever I am sent.

Q. How many ships in the course of a year do you suppose you inspect?

A. Well, about 50 a month. That would be about 600.

Q. A year?

A. A year.

Q. And you have been doing that for five years?

A. Yes.

Q. Now, will you state, Captain, what your experience and training was prior to your having become a surveyor for the New York Board of Underwriters?

A. Well, I have been a seaman, an officer and master, in both steam and sail.

Q. Do you hold an American master's license?

A. I do.

Q. How long have you held that license, approximately?

A. About 25 years.

Q. And you have actually been in command of ships?

A. About 20 years.

Q. What lines did you act as master for?

A. The Ward Line, and the Mallory Transportation Line, as master.

[fol. 490] Q. And prior to that you had worked yourself up to master?

A. I worked myself in the Ward Line.

Q. How old are you?

A. 57.

Q. Captain, as a surveyor for the New York Board of Underwriters, were you given any instructions and told what your duties were?

A. Outside of surveying the ships, that is all; living up to the rules of the Board.

Q. They have printed rules, have they not?

A. They have.

Q. And do you make reports of each survey that you make?

A. We do.

Q. Captain, did you go aboard the "Galileo" in August, 1926?

A. I did.

Q. Have you some notes so that you can tell me what date it was you first went on board?

A. My pass book shows that I went on board of her on August 23rd.

Q. What year?

A. 1926, and issued a pass. The time was 11:30 A. M.

Q. That was 11:30 A. M. that you went on board the "Galileo" on August 23rd?

A. 23rd, 1926.

Q. You actually, physically, went on board the vessel?

A. I did.

Q. And when you got aboard the vessel, what did you do?

A. I inspected the cargo holds.

Q. All of them?

A. All of them.

Q. Did you go down into No. 2 tween decks?

A. Yes.

Q. Did you see the wooden bulkhead which separated No. 2 tween decks from No. 3 tween decks?

A. Yes.

Q. Did you make any inspection of that bulkhead?

A. I did.

[fol. 491] Q. Did you know any coal was on the other side?

A. I knew that coal was there, and was going to be put aboard.

Q. Do you recall what the bulkhead looked like?

A. It was a wooden bulkhead. As well as I can remember, it was about 3-inch planks running up and down.

Q. And how wide were the planks, if you remember them?

A. Planks are usually around 10 inches. I couldn't remember now, but I should say around 10 inches thick.

Q. What else did you see about the bulkhead, Captain?

A. Well, they had over the cracks—as near as I can remember, they were sheathed with slats or battens.

Q. How were they fastened to the bulkhead?

A. Nailed on.

Q. One of those over each crack?

A. Yes.

Q. What else did you see about the bulkhead, Captain?

A. I think—yes, I am sure—that there was what they called a separation cloth over the bulkhead.

Q. Where was that?

A. That was on the forward side of the wooden bulkhead.

Q. No. 2 tween decks?

A. Yes.

By the Court:

Q. How could you ever see the battens if the cloth was there?

A. This cloth is over the battens, but you could always feel those battens underneath, and why I was so anxious about this bulkhead was on account of the cargo that she had in there, and she also had a magazine, and I was anxious to be sure that the bulkhead would be strong.

[fol. 492] The Court: That is what is sometimes known as the lower tween deck?

The Witness: The lower tween deck, and the shelter deck.

By Mr. Keating:

Q. You looked at both bulkheads?

A. Yes.

By the Court:

Q. Did you go into No. 3 at all?

A. No. 3 is where the coal was, you know.

Q. Yes.

A. No, I don't remember going down where the coal was.

Q. I am not sure just what you did. You went down and looked at this bulkhead, which is covered over with a separation cloth?

A. Yes.

Q. And you say you felt some of the battens?

A. Yes.

Q. You couldn't feel them all?

A. I couldn't feel everything, but I was satisfied.

Q. What does that mean, you were satisfied?

A. As long as the cloth was there, it would keep the dust from coming in on the cargo.

Q. That was the only thing in which you were interested?

A. Yes.

Q. Just the dust?

A. Yes, to protect the cargo that was in No. 2.

By Mr. Keating:

Q. Your interest in the bulkhead was that it would be dust-proof and strong?

A. Dust-proof and strong.

Q. You had two things in mind: Strength and its ability to resist dust?

A. Yes.

[fol. 493] Q. Were you there before cargo was put in No. 2?

A. I was.

Q. How many times were you on the ship?

A. Well, I was there up until she sailed, every day.

Q. Captain, from your experience as a surveyor and as a master, will you tell us whether or not in the Port of New York and elsewhere it is usual to carry coal in a compartment which is separated from another compartment by a wooden bulkhead such as you have described and saw on this vessel?

Mr. Jones: That is subject to the objection I have noted to this question wherever it is propounded.

The Court: Overruled.

A. It is customary in the Port of New York.

Q. Can you give us an approximate idea of how many vessels you have seen carrying coal in similar spaces to this?

A. You mean as long as I have been on shore or going to sea?

Q. As long as you have been going to sea.

A. I would say 100 vessels, more or less. I couldn't say any number, you know. I never kept an account of the number.

Q. Have you seen any lately, Captain?

A. Yes, but I don't recall the ship.

Q. Would you turn down the stowage of a ship that carried coal in such a compartment against a wooden bulkhead, in which cargo you were interested in was carried?

Mr. Jones: I object to that.

The Court: I sustain the objection on the ground of the competency of the objection.

[fol. 494] Q. Captain, as a result of your inspection, did the New York Board of Underwriters issue a certificate?

A. It did.

Q. Is this the certificate? (Handing paper to witness.)

Mr. Jones: May I see the certificate?

The Witness: That is my signature.

Mr. Keating: I ask that it be marked in evidence.

Mr. Jones: It isn't a statement of the Board of Underwriters; it is a certificate of the Underwriters. You are referring to it as a certificate of the Board.

Q. Is this your certificate or a certificate of the Board of Underwriters?

Mr. Jones: I object to it as calling for a conclusion.

The Court: I will sustain the objection.

Q. Captain Huff, does the Board of Underwriters of New York issue a certificate over the surveyor's signature or over any signature?

A. Over my signature.

Mr. Jones: I object. The certificate is here.

The Court: I overrule your objection and give you an exception.

He says, as I understand him, that the general custom is to issue, that is, for the Board of Underwriters to issue certificates over the surveyor's signature. Do you want to dispute that?

Mr. Jones: I will. I know very well that is not so.

[fol. 495] Q. Did you have authority from the New York Board of Underwriters to issue this certificate?

Mr. Jones: I object. The surveyor issues his certificate, and your Honor will find that in the certificate itself the following language is contained:

"This certificate is issued on the conditions that while the officers and committees of the Board use their best endeavors to insure that the functions of the Board are properly executed, neither such officers nor such committees, nor the Board are under any circumstances whatever to be held responsible for any inaccuracy in any report or certificate issued by the Board of its surveyors, or for any error of judgment, default, or negligence of the surveyors or other employees or representatives of the Board."

Mr. Keating: They simply don't want to be sued. That has no bearing on the question of whether this is the Board's certificate or the surveyor's. I asked him if he had authority from the Board——

The Court: Is it to be marked in evidence?

Mr. Jones: I ask that it be marked in evidence.

Mr. Keating: No objection.

(Marked Exhibit M in evidence of this date.)

The Court: You may inquire as much as you want as to the custom of trade and custom of issuing the certificates.

[fol. 496] By Mr. Keating:

Q. Will you state to his Honor, Captain Huff, what the practice and custom is about the issuing of these certificates, such as Exhibit M marked in evidence?

A. Well, we visit the ship and issue a pass.

Q. What does that mean?

A. That the ship is in condition to load.

Q. Load cargo?

A. Load cargo.

By the Court:

Q. Who do you issue that to?

A. We issue that to the ship.

Q. Hand it to the master?

A. Usually hand it to the superintendent on the dock.

Q. Pier superintendent?

A. Pier superintendent, and then we visit the ship, well, every day, once every day; sometimes, if it is necessary, we visit it twice a day. It all depends on the cargo they are taking, and whether we consider it necessary to visit more than once. When the ship is finished loading we issue the certificate that it is loaded.

Q. Do you give that to the superintendent of the pier also?

A. That is usually sent to the office.

Q. Office of the agent?

A. Of the agents.

Q. Is there any other type of certificate, other than the one which we have in evidence, that is issued by your Board?

A. None that I know of.

By Mr. Keating:

Q. Captain, has the New York Board of Underwriters any connection with any steamship company?

A. Just what do you mean by that?

[fol. 497] Q. I mean, are they employed by any steamship company or is it an independent organization?

A. Well, the steamship company pays for the certificate.

Q. They pay a fee?

A. Yes.

Q. But have they any interest in the New York Board of Underwriters?

A. Which, the steamship company?

Mr. Jones: If he knows.

Q. If you know.

A. No, not that I know of.

Q. Now, Captain, in your experience as a master have you carried coal?

A. Yes.

Q. Did you ever carry it behind wooden bulkheads?

A. I have.

Q. How many times did you do that?

A. Well, the last three voyages, before I stopped going to sea and came ashore, I carried coal on one side, cargo on the other—voyages out to East Africa, South Africa and Mauritius.

Q. In that trade, can you say whether or not it is usual and customary for their ships to carry coal behind wooden bulkheads?

A. Yes, it was.

Cross-examination.

By Mr. Jones:

Q. Capt. Huff, do you know whether the Board of Underwriters of New York is a corporation?

A. Whether it is?

Q. Whether it is a corporation?

A. No.

Q. As a matter of fact, you don't know anything about the organization of the Board, do you?

A. No, I don't. I am only interested in surveying.

Q. So you don't know anything about who has any proprietary interest in the Board of Underwriters of New York, do you?

A. If——

[fol. 498] Q. If you don't know——

A. I don't quite understand that question.

Q. Well, you know what a stockholder is?

A. Sure.

Q. Do you know whether or not there are stockholders in the Board of Underwriters of New York?

A. It——

The Court: Do you or don't you know? If you don't know, say no.

The Witness: All I know is——

Q. I said, do you know whether or not there are any stockholders in the Board of Underwriters of New York?

A. No, I do not.

Q. You don't know anything about the corporate organization?

A. No.

Q. You don't know whether it is a corporation or not a corporation?

A. No.

Mr. Jones: I move to strike out any evidence this witness has given as to what the Board of Underwriters is. This witness doesn't know.

The Court: Strike it out.

Q. Now, Capt. Huff, I show you Exhibit M, and I ask you if you ever saw any certificate which you issued, or any other surveyor of the Board of Underwriters of New York issued, that was issued in any different form than this one?

A. No, I did not; no, sir, no difference. They all look alike to me.

Q. Did you ever see one that was signed by the Board of Underwriters at the bottom?

A. Well, formerly they were signed by the Assistant Secretary too.

[fol. 499] Q. How long ago was that?

A. Well, I don't remember just how long ago it is. Three or four years; I don't remember.

Q. But at the time this was issued, and some time prior to the time that Exhibit M was issued, you had never seen any certificate which was other than the certificate signed by the surveyor alone, with reference to the Board of Underwriters, over the signature of the surveyor; that is correct, isn't it?

A. That is the only kind of certificate, with the exception of the other one that I spoke of, that was signed by the Assisstant Secretary.

Q. You don't know how he signed his name?

A. No; he was the Assistant Secretary then.

Q. Isn't it a fact that you went aboard this ship largely for the purpose of inspecting the ship with respect to the grain cargo she was to carry?

A. Grain and general.

Q. And you were principally interested in seeing whether the holds where the grain was to be stowed were grain tight?

A. Yes.

Q. And the grain was bulk grain?

A. Bulk grain.

Q. And that had to be carried in the lower holds?

A. Yes.

Q. The rules so require?

A. Yes.

Q. And those rules are approved by the British Board of Trade? You know that?

A. Yes.

Q. And any ship carrying bulk grain to Great Britain has to be loaded in accordance with the rules of the Board of Underwriters of New York, and in accordance with the provisions of the British Board of Trade; that is true, isn't it?

A. Yes.

Q. And you were principally interested in seeing that [fol. 500] those grain holds were grain-tight, isn't that it?

A. What do you mean by grain-tight?

Q. Well, now, Captain Huff, you have an illustrated set of rules with respest to loading grain?

A. Yes.

Q. Have you that with you?

A. No—I think I have.

Q. I know the pamphlet quite well.

A. I haven't got it with me.

Q. That looks as though it might be it.

A. This is the new rules that have come out since it came out last—yes.

Q. They are the new rules for the loading of grain?

A. Very little difference.

Q. We can have a copy of the old rules which were in existence at the time this ship was loaded can't we?

A. I think so.

Q. Now, I see here this rule: "All feeders must be grain-tight. Steamer with lower 'tween decks must have hatchway feeders; and if the distance in the lower holds between the forward bulkhead and the nearest end of the hatchway feeder exceeds 25 feet (25-) (unless in the opinion of the surveyor, the distance should be less), then the vessel must have a wing feeder on each side and bolts in the 'tween decks to fit this space." The heading of that paragraph is "All feeders must be grain-tight." That is an absolute regulation, isn't it?

A. That is.

Q. And have to be very tight to be grain-tight?

A. Yes.

Q. You couldn't load bulk grain in the 'tween decks, could you?

A. You can't load bulk grain between the two upper decks. If that ship had a 'tween deck I could load.

Q. But you had to load the grain in the lower holds of [fol. 501] that ship?

A. We could load it in the 'tween decks too.

Q. Don't your rules requires that your holds be loaded if you are going to be loaded?

A. Why——

Mr. Keating: I think the witness ought to be allowed to finish his answer.

A. (Continued.) The rules say you can. That is a very big ship, and I can load grain in the lower hold and in the tween deck, but you can't load bulk grain in the upper deck.

The Court: Why?

The Witness: On account it is too high up and if it should shift, it would give the ship a list and make it dangerous. The higher up the grain——

By the Court:

Q. That is the only reason?

A. That is the only reason. It is less risk than you have in bags in the tween decks.

By Mr. Keating:

Q. It is dangerous to load bulk grain in the tween decks, isn't it?

A. Between the two upper decks, yes.

Q. And it makes the construction of level shifting boards in the tween decks necessary?

A. Yes.

Q. You never received any authority in writing from anybody from the Board of Underwriters of New York?

A. Authority about what?

[fol. 502] Q. Authorizing you to do anything in the name of the Board of Underwriters?

A. Outside of inspecting the ship, no.

Q. And you got your orders from your superior officer, Capt. Evans to go out and inspect a ship?

A. Yes.

Q. And I take it you were simply interested in the cargo of this vessel. You had no interest in the coal or in the

ship's management, had nothing to do with it, isn't that so?

A. As long as she is safe and seaworthy.

Q. You didn't go and look at her engines?

A. No.

Q. And you didn't go into her bunkers?

A. No.

Q. It is none of your business, is it?

A. No.

Q. Isn't it a fact that your steamship company pays for this service?

A. They do for the certificate, yes.

Q. With respect to this wooden bulkhead, as I take it from what you said to his Honor, you never saw the bulkhead at all; all you saw were the separation cloths which were draped over the bulkhead?

A. Yes, from the forward side.

Q. So that I am certain that I understand what you mean to tell us, I will say what I understand you to have said: You went into No. 2 tween decks?

A. Yes.

Q. And you saw, at the after end of that space, a cloth had been draped over a bulkhead?

A. Yes.

Q. And then you went and felt that cloth and felt battens under the cloth?

A. Yes, and felt around the planks too.

Q. So that is all you know about it?

A. Yes.

Q. And you were interested to see that these cargo separation cloths were there?

A. Yes.

Q. You felt it was necessary for them to be there, didn't you?

A. Yes.

[fol. 503] Q. And from your feeling of the bulkhead you felt, without the cargo separation cloths being there, that dust would come through from the coal to the cargo?

A. No, they had the battens there. I think the separation cloths were an extra precaution.

Q. Why were you interested in the separation cloths?

A. I was interested—it was put up there before I got there.

Q. You didn't know anything about the bulkhead itself, as far as this feeling in a few places, as to the character of the bulkhead?

A. I satisfied myself as to the strength of it.

Q. But as to the tightness of it you didn't know?

A. I was satisfying myself as to the tightness, or I wouldn't issue a pass.

Q. What area did you feel?

A. I felt across the whole width of the ship.

Q. Did you feel every batten?

A. No.

Q. How many did you feel?

A. I don't know.

Q. Did you feel as many as five?

A. Yes.

Q. As many as six?

A. Yes.

Q. As many as seven?

A. Yes.

Q. As many as eight?

A. Yes.

Q. How many did you feel? Give us the maximum number that you felt.

A. I couldn't say. I can't recall how many. That is one ship out of 1800.

Q. Exactly. So, as a matter of fact, you relied upon that separation cloth and the general impression which you got, that the bulkhead was strong, for the purpose of reaching your conclusion that it was dust-tight?

A. Yes, I was satisfied with the bulkhead.

Q. And you in fact relied more on the separation cloth than you did upon the bulkhead?

A. No, I would rely upon the battens.

[fol. 504] Q. How could you rely upon the battens if you didn't see them?

A. If the separation cloth wasn't there I would have seen every batten, but without seeing them all and the separation cloth, then I was satisfied they were dust-proof.

Q. Then the point is, you did rely upon the separation cloth, didn't you?

A. Yes.

Q. You were not asked to inspect and pass upon the stowage of coal, were you?

A. No.

Q. Then your certificate has nothing to do with the coal, has it?

A. No, not unless it was cargo. If they don't put it on the certificate, then we won't.

Q. You didn't know coal was cargo or not, did you?

A. No, I didn't.

Q. But you never went in the compartment where the coal was stowed?

A. No.

Q. No one told you it was cargo?

A. No.

Q. So it was bunker?

A. It didn't make any difference to me whether it was bunker—it is all coal.

(Witness excused.)

ROBERT H. LAVERIE, called as a witness on behalf of the respondent, having been duly sworn, testified as follows:

Direct examination.

By Mr. Keating:

Q. Mr. Laverie, what is your business?

A. Marine surveyor.

Q. By whom are you employed, Mr. Laverie?

A. I have my own business as R. H. Laverie & Son, marine surveying business, and I am personally chief surveyor to the Bureau Veritas, International Register of Shipping.

[fol. 505] Q. What is the Bureau Veritas, Mr. Laverie?

A. The equivalent of the American Bureau of Shipping, Lloyds Register of Shipping, excepting that it might be classed as the largest international society and the oldest classification society.

Q. Has it anything to do with ship owners as such?

A. No, sir.

By the Court:

Q. What position did you hold with that Bureau?
A. Chief surveyor for the United States and Canada.

By Mr. Keating:

Q. Mr. Laverie, will you state generally your experience which led up to your becoming chief surveyor to the Bureau Veritas?

A. I completed my training as ship builder and engineer with my father in Quebec, in Canada; he was general manager, G. T. Davis Shipbuilding Company at Quebec. Following which I was working as a ship fitter at the American Steel Bridge Company, at West Superior. From there I went to Cramp's Shipyard, Newport Shipbuilding Company, the Harris Company at Bristol, the Fore River Shipbuilding Company, at East Braintree; following which I came to the Cross Shipyard at Elizabeth, and thereafter to Downes & Downes Shipbuilding Company at Shooter Island, New York Harbor. In 1908 I started my consulting business, and in 1910 was appointed to the Bureau Veritas.

Q. As Chief surveyor?
A. As chief surveyor.
Q. And have been since 1910?
A. Yes, sir.

Q. Mr. Laverie, in your capacity as chief surveyor to the Bureau Veritas have you had occasion to inspect a large [fol. 506] number of vessels?

A. Yes, sir.

Q. How many do you suppose you personally inspect in the course of a year?

A. Well, during the last two years the number of ships were diminishing, and my office work prevented me from the actual inspection of ships. Previous to that, both in my capacity as chief surveyor and in my capacity as private surveyor, I have surveyed a great many vessels.

Q. Does it run into hundreds?
A. Oh, yes, sir.
Q. Thousands?
A. I wouldn't say thousands—hundreds.

Q. Will you state, Mr. Laverie, from your experience as a surveyor whether or not it is usual and customary to carry bunker coal in a compartment which is separated

from another compartment by a wooden bulkhead which is not air-tight?

A. Yes, sir.

Q. In your experience how many vessels have you seen carrying coal against wooden bulkheads that weren't air-tight?

A. Probably 25 or 30.

Q. Have you seen any recently?

A. I have inspected the steamer "St. Quentin" on Monday for damage to the steel transverse beam of such a wooden bulkhead.

Q. Was she carrying coal against the wooden bulkhead?

A. Yes, sir.

By the Court:

Q. How was that bulkhead made?

A. Vertically planked with the steel beam angle bracketed to the ship's side with steel brackets at about 10 feet height from the ceiling.

[fol. 507] Q. How were the planks joined together?

A. Just seamed and battened.

Q. Battened?

A. Yes, sir.

By Mr. Keating:

Q. What kind of battens do you mean, Mr. Laverie?

A. About a 3 or 4 inch batten, and a half inch thick.

Q. On either side?

A. On the cargo side.

Q. Have anything else besides the battens?

A. No, sir.

Q. Not on that side?

A. Not on that side.

Q. Mr. Laverie, are you familiar, from your experience in shipbuilding and as chief surveyor to the Bureau Veritas, with ships' bunkers?

A. Yes, sir.

Q. I don't mean the coal. I mean the actual ship's bunkers?

A. Yes, sir.

Q. Is the usual ship's bunker air-tight?

A. No, sir.

Q. Will you describe the ordinary ship's bunker to his Honor with respect to why it isn't air-tight?

Mr. Jones: I object to the question. Describe the ship's bulkhead, why it isn't air-tight. The question calls for a conclusion.

The Court: I will overrule your objection and give you an exception.

A. The strength beams of the vessel pass through the bunker casings in almost all vessels and the deck beams pass through. Where they pass through, a much larger opening is made in the bunker side plating, following which [fol. 508] a plate collar is fitted as tightly as it can be fitted to prevent the coal, the small coal, from coming through, but invariably, particularly in the fire room, no attempt is made to have it absolutely tight.

The Court: Those openings would be mostly high up, above the coal.

The Witness: They would start at the 'tween deck level, then the bunker doors are ordinary sliding doors to keep coal from running in on the fire room floor, and aren't tight, and are seldom closed.

Cross-examination.

By Mr. Jones:

Q. As I understand you, those beams which you have told us about are beams that would run on the top of the bunker or lower down in the ship?

A. Strong beams are fitted sometimes between the engine room and boiler room.

Q. Now I think we are talking at cross purposes. The bottom of the bunker I will call the floor in order not to have any misunderstanding between us, and the top of the bunker I will call the roof, so that we won't have any misunderstanding. Now, this beam which you have described is riveted right underneath the roof and not on the floor of the bunker?

A. Yes, sir.

Q. So that wouldn't run through the pile of coal itself?

A. No, sir.

Q. And any air that would admit would be admitted to the surface of the coal and not to the bottom of the coal?

A. Excepting that you have two and sometimes three decks passing through your coal bunker. In other words, when you speak of the roof and floor, they would be two and sometimes three stories below deck level.

[fol. 509] Q. That is a very unusual bunker to have, a bunker that has a very deep hold such as you have described now?

A. No, sir.

Q. That is a common type of bunker?

A. Where you have a shelter deck, a 'tween deck, and you have two decks at least.

The Court: Don't those decks run through the bunker?

The Witness: Yes, sir, with small hatch openings to permit the coal to run down freely.

By Mr. Jones:

Q. So there would be an air space above the coal in each one of those pockets or bunkers?

A. Yes, in the corners.

Q. That is where the beam would be?

A. But when the bunker was entirely full of coal you would have air getting through those collars into the middle of the coal.

Q. On top of the coal?

A. Into the middle of your coal when your bunker was filled.

Q. Mr. Laverie, you don't mean that. So we can't have any mistake about what you have been saying, will you draw here what you mean by those bunkers which you have described?

A. This would be your lower bunkers, the 'tween deck bunkers, and in some cases your upper deck bunker.

Q. The lower bunker I mark with the letter A; the 'tween decks bunker I mark with the letter B, and the upper deck bunker I mark with the letter C. Now, where are those beams you told us about?

A. (Witness complies.)

[fol. 510] Q. Now, the beam which the witness has drawn I shade throughout its length, and I put the letter X at

one end and the letter Y at the other. Where is the other beam you are talking about?

A. Yes, sir. (Witness complies.)

Mr. Jones: I shade a beam and I put the letter T at one end and the letter S at the other.

Q. Any more beams?

A. The upper deck beam.

Mr. Jones: And the upper deck beam I shade and put the letter M at one end and the letter N at the other.

Q. Now, isn't it entirely obvious that any air that comes into that bunker comes into the top of the coal, that is, the bunker A?

A. Speaking of the lower bunker?

Q. Yes, isn't it entirely obvious that there is a steel water-tight, air-tight deck between bunker B and bunker A, except for the hatch that is there to let the coal run from one to the other?

A. On many occasions the deck plates are large openings without hatch coamings.

Q. They should have a hatch there?

A. The plate is left out entirely for the free flow of the coal to the lower bunkers.

Q. That I know is a negligent practice.

A. Not necessarily.

Q. I recall looking at Lloyds rules in connection with the steamer "Vestris", and I noticed that Lloyds rules had a specific requirement that where you had such bunkers you should have hatches and keep them tight, and you have a similar rule in your society?

[fol. 511] A. Where they are opening to a deck. You are speaking of a lower hatch opening; that it must be kept tight?

Q. Yes.

A. I don't think that other than strength deck was water-tight.

Q. But isn't deck XY a water-tight deck?

A. No.

Q. Isn't T-S a water-tight deck?

A. Yes.

Q. So any opening there must be tight?

A. Yes; not on the lower deck.

Q. Do you pile coal up to the bunker?

A. The coal ordinarily has free run from the upper deck down into the lower deck—into the lower bunker.

Q. So, now, let us take this X-Y, this beam is fastened to the side of the oval?

A. Yes, sir.

Q. But I suggested that any air could come into the side of the oval into the bunker?

A. I testified that it was where the beams passed through the bunker casings.

Q. That is quite easy to make that tight at the point X?

A. The beams don't pass through the oval at all.

Q. It is quite easy to make that tight, isn't it?

A. Yes, but it is never tight. The deck isn't tight to the deck plates. It isn't required.

Q. Who don't require it?

A. The classification rules of the Society.

Q. You say they don't require it?

A. Yes.

Q. It is quite easy to make this point tight at Y, if you want to?

A. Well, it is, but it is never done.

Q. And this point can be made tight?

A. Yes; it isn't the practice to do it.

Q. As a matter of fact, the amount of air that gets into the body of the coal, into this place in infinitesimal?

A. Comparatively; not forgetting the large opening of the bunker doors.

[fol. 512] Mr. Jones: I ask that the sketch be marked in evidence.

(Marked Libelant's Exhibit 27 in evidence.)

By the Court:

Q. About how large in square inches would these openings be in the given wall which ran over them up by either the beam or the collar?

A. Oh, comparatively small.

Q. Can you give me some idea?

A. Maybe an eighth of an inch surrounding the entire opening.

By Mr. Jones:

Q. Now, Mr. Laverie, these beams don't run through any bulkhead at all, do they, because they are athwartship beams?

A. They run through the fore and aft bunker casings.

Q. And that is a wall that forms a side of the bunker, isn't it?

A. Yes, sir.

Q. And I understood you to say to his Honor that the opening around the beam was only around one-eighth of an inch?

A. Yes, sir.

Q. Now, what are the sizes of these beams? Are they 6 inches high?

A. All the way from 12 to 6 inches, in the different hatches.

Q. They range from 12 to 6 inches in height?

A. Yes, sir.

Q. How wide are the beams?

A. 12 x 4—4 inch averages.

Q. Take this same sketch—I suppose it is an ordinary I-beam?

A. In some cases I-beams; sometimes channel.

[fol. 513] Q. Sketch out the type of beam.

A. (Witness complies.) That is a section of the beam.

Mr. Jones: I write the word "beam" there and shade the beam.

Q. That beam is made fast to the ship where?

A. At the side with a gusset.

Q. Show me where the rivets go through this beam?

A. At the ship's side?

Q. At the point Y. A. In the fitting of the plate—this dotted lines represents the opening—in order to permit free placing of the plate around the beam, the collar at that point is fitted as closely as it can be fitted in this fashion, with rivets. The plate is about at that point and the collar goes up and takes the same rivets, and that is made of two halves, fitted as snugly together as possible.

Q. So we can fully understand, at the place I put the figure 1, is what I will call the top of the collar, one corner of the top; the place where I put the figure 2 is the other

corner of the top; and figure 3 is one corner of the bottom, and figure 4 is another corner of the bottom?

A. Yes.

Q. That collar is then placed over the entire opening that was cut to permit the beam to go through?

A. Yes.

Q. And that collar that enclosed the space that was cut out, I marked the corners 5, 6, 7, and 8, so that that space is entirely closed, and the only space that is left is the crack around the edge of the beam.

A. Which is a sixteenth to an eighth of an inch.

Q. Now, this bunker which you have described is a bunker where all the sides of the bunker are made of steel?

A. Yes, sir.

[fol. 514] Redirect examination.

By Mr. Keating:

Q. And they make a water-tight compartment; water-tight bulkhead?

A. No, sir.

Q. Is the ordinary steel bulkhead water-tight and air-tight?

A. No, sir.

The Court: I note an exception to both sides. I want to ask some questions.

By the Court:

Q. What is the usual practice in the construction of permanent bunkers, in reference to the use of wooden bulkheads? Are they ever used?

A. They are. This particular vessel that I described——

Q. I don't want you to think on one particular vessel. I want to know from your general practice and surveying. I want to get an idea of about how usual it is to have wooden bulkheads on permanent bunkers. What percentage of cases have wooden bulkheads on permanent bunkers?

A. Well, I don't know that there is such a permanent rule. In other words, the requirements of temporary bulkheads are an everchanging one. If a vessel returning from a voyage has a longer voyage on this occasion than on

the last one, that bulkhead is moved forward to take more reservation, more bunker coal, so that the actual permanency of the wooden bulkhead is one of owner's convenience more than of classification and requirement.

Q. Well, there is such a thing as permanent bunkers in boats, isn't there, that aren't adjustable to size, and if the master needs more coal he has got to construct some kind of temporary bunker, is that true?

A. That is true.

[fol. 515] Q. Now considering the permanent bunkers: In what percentage of cases do you have wooden bulkheads on permanent bunkers?

A. Not very many.

Q. Rather unusual, isn't it?

A. Yes, I should say it is rather unusual.

Q. What would you think of the safety of that?

A. My experience has been one of having no hesitation in approving.

Q. It wouldn't be as safe as a steel bulkhead, would it?

A. It would. It has developed from the wooden ships, and we are building wooden ships yet, where you have wooden bulkheads carrying all kinds of cargoes.

Q. I mean with particular reference to the stowage of coal. Is a wooden bulkhead as safe as a steel bulkhead for the stowage of coal, generally speaking?

A. I wouldn't say. I would prefer a steel bulkhead, but I wouldn't hesitate to pass a wooden bulkhead.

Q. Now, as to various types of wooden bulkheads, is this batten construction that is used in this boat as safe as the other forms of wooden bulkheads?

A. Yes, sir, in my opinion.

Q. Wouldn't there be more considerable opportunity for air to go through a bulkhead constructed in this way than there would be if the bulkhead were caulked?

A. I never knew of a caulked bulkhead—a temporary bulkhead, fitted.

Q. What other method do they use to keep the air out?

A. I never knew of the question of air being considered. It was one of protecting the cargo. For instance, a paper cargo. They might take extra precautions by fitting additional paper over the seams before the battening was done. On some occasions they go to a greater extent and put on a

[fol. 516] sheath, solid sheath bulkhead over your strength bulkhead. Those are for extraordinary purposes.

Q. You have then considered the safety of wooden bulkheads mostly from the point of view from the safety of cargo being contaminated by coal dust, is that so?

A. That is the only consideration ordinarily given to it. The custom has been followed in the fitting of wooden bulkheads for reservation bunker purposes.

Q. You don't know anything about the dangers arising from coal generating heat—spontaneous combustion?

A. No, sir.

Q. You haven't considered bulkheads from that point of view at all?

A. No, sir, only from general practice.

Recross-examination.

By Mr. Jones:

Q. In other words, you have never studied the subject of spontaneous combustion?

A. I don't claim to be an expert.

Q. On the way coal is stowed?

A. No, sir.

Q. And you aren't expressing an opinion on that subject?

A. No, sir.

(Witness excused.)

Robert S. Haight, called as a witness on behalf of the respondent, having been duly sworn, testified as follows:

Direct examination.

By Mr. Keating:

Q. Mr. Haight, what is your business?

A. Consulting marine engineer and ship's surveyor.

[fol. 517] Q. Will you state briefly what your experience has been which has led up to your present position?

A. I was graduated from Stevens Institute as a mechanical engineer in 1899. After that I served two years as a draftsman in shipyards; four years as assistant engineer on a steamship; four years at sea as engineer, after which

I came ashore and established myself in the present profession in New York.

Q. How long have you been a marine surveyor in New York?

A. Since 1909, that is 20 years ago.

Q. Mr. Haight, you were also a number of years surveyor for the Bureau Veritas, weren't you?

A. Yes, sir.

Q. Did you have a title with the Bureau Veritas?

A. Part of the time I was assistant chief inspector for the United States and Canada.

Q. Mr. Haight, have you made any special study of the measurement of cubic capacity of cargo vessels?

A. Yes, I have specialized in the measurement of cargo holds and cargo spaces.

Q. And in the course of your specialization, have you examined a small number of vessels?

A. No, a large number.

Q. Can you give me a rough idea of about how many, generally speaking?

A. Well, over a thousand. I should hesitate to say thousands. Certainly over a thousand.

Q. Will you state, Mr. Haight, from your experience in surveying this number of vessels, which you have mentioned, whether it is usual and customary to carry bunker coal in a space separated from another space by a wooden bulkhead, which is not air-tight?

A. Quite usual.

Mr. Jones: My associate tells me that I haven't reserved [fol. 518] my objection on all witnesses. I think Mr. Keating understands.

The Court: Yes. Furthermore, when either side prepares the record, if you find an exception isn't noted for the formal objection, it will be noted at any place, even if you haven't mentioned it. I will give each side every opportunity to test out the propriety of the rulings.

Q. Mr. Haight, I asked you to prepare a list of vessels which you had personally seen which carried coal in spaces similar to the "Galileo", against a wooden bulkhead. Have you prepared such a list?

A. Yes, a partial list.

Q. What do you mean by a partial list?

A. I went through the first three letters, A, B, C, in my ship file and took out each ship which carried coal in spaces similar to the "Galileo" against a wooden bulkhead. I didn't go all the way through the list because I don't think anything would be added by so doing.

Q. How many vessels had you seen?

The Court: Well, of course this is incompetent.

Mr. Jones: You can't prove custom by particular instances in a matter that may be brought out in cross examination.

The Court: I note an exception to the respondent.

Mr. Jones: No cross examination.

(Witness excused.)

[fol. 519] CHARLES E. ROSS, called as a witness on behalf of the respondent, having been duly sworn, testified as follows:

Direct examination.

By Mr. Keating:

Q. Mr. Ross, what is your business?

A. Naval architect and engineer and surveyor.

Q. Will you state briefly what your qualifications are, Mr. Ross?

A. I was graduated from the University of Pennsylvania in 1888, taking the degree of Bachelor of Science. In 1889, Post-Graduate course, took the degree of Mechanical Engineer. Thereafter I went with the Rhode Shipyard, at Chester, Pennsylvania, in the drawing and construction department, and I was there a matter of ten years. At the end of that time I was in charge of machinery design and construction. Thereafter I went to the Morgan Iron Works in New York, and was superintendent in the matter of repairs and construction and operation. After that I joined with Mr. Henry Rodman, with offices at 117 State Street, as consulting engineer. After his death I joined with Mr. Frank S. Martin, and was with him until a matter of 8 or 10 years ago, when I opened my own office. Dur-

ing that period I have been interested in the construction, repair and maintenance of vessels of various types.

Q. Mr. Ross, in the course of your experience have you personally surveyed a large or small number of ships?

A. Quite a large number.

Q. Will you state whether or not from your experience it is customary and usual in the Port of New York for cargo vessels to carry coal in spaces similar to the "Galileo", as described to you, with coal on one side and cargo [fol. 520] on the other side of a wooden bulkhead which is not air-tight?

A. On coal burning ships it is quite customary.

Mr. Jones: No cross examination.

(Witness excused.)

C. L. Burke, called as a witness on behalf of the respondent, having been duly sworn, testified as follows:

Direct examination.

By Mr. Keating:

Q. Mr. Burke, what is your business?

A. Marine surveyor and consulting engineer.

Q. Will you state what your experience has been which has led up to your present position?

A. For the past between six and seven years I have been with Mr. Charles E. Ross, and previous to that I was port engineer for the United American and American Hawaiian Lines, and ships around the coast. Previous to that I was chief engineer, to start, in the American Hawaiian Lines, on different ones of their vessels. Previous to that I had been with the Standard Oil Company of New York as chief engineer, and also different grades of engineer.

Q. How many years, Mr. Burke, had you served as chief engineer of coal-burning vessels?

A. From about 1907, chief engineer on part coal and part oil-burning vessels.

Q. What portion of that time was with coal-burning vessels?

A. Probably about equal.

Q. Prior to your being chief engineer on coal-burning vessels, had you served an apprenticeship up through the ranks?

A. Yes, sir.

[fol. 521] Q. How many years did you go to sea as a coal-burning engineer? I don't mean as a chief engineer, but as an engineer.

A. From 1901 or '02 I was an engineer.

Q. When you were the port engineer for the American Hawaiian and United American did you have supervision over the engineers?

A. Yes, sir.

Q. That was your job?

A. Yes, sir.

Q. Since you have been in private practice what has your experience been on the engineering, coal side?

A. You mean since I have been with Mr. Ross?

Q. Yes.

A. General.

Q. Were you here last night, Mr. Burke, when I read the two hypothetical questions?

A. Yes, sir.

Q. Do you remember them?

A. I can't say I remember all of it. I have a general idea, that is all.

Q. I show you the builder's plan of the steamer "Galileo", which is Exhibit 18, together with Exhibits 10, 11 and 12, being certain sketches of the steamer drawn approximately to scale, and ask you to assume the following facts:

1. That the steamship "Galileo" is a steel cargo vessel of about 4100 registered net tonnage, having three decks and six holds, each hold being divided into a lower hold, a tween deck and a shelter deck;

2. That No. 3 tween deck compartment, located on the tween deck forward of the permanent bunker space and aft of the No. 2 tween deck, is a compartment approximately 33 feet long, 50 feet wide and 10 feet high;

3. That the sides, bottom and top of No. 3 tween deck are steel, the forward end consisting of a bulkhead constructed [fol. 522] of planks about 10 inches wide and 3 inches thick running vertically from the top of the compartment to the floor and held in place or fitted into grooves composed of

sills or pieces of wood about 10 inches wide and about 6 inches high placed against the bottom and top of the bulkhead on each side; that the edges of each plank are planed and fitted closely together; that over each seam where the planks come together strips of wood or battens about 3 inches wide and about ¼ of an inch thick were nailed on both sides of the bulkhead, wire nails were used, the nails on each side of the batten being about one inch apart; that there were also made fast to the No. 2 tween deck side two or more separation cloths somewhat larger than an ordinary hatch tarpaulin, made of material somewhat similar to bagging, although heavier and of a closer texture, which were attached to the bulkhead at the top by placing a batten outside of the separation cloth and nailing it against the bulkhead; that where the separation cloths overlapped a batten was nailed vertically over the separation cloths against the bulkhead to join them together, the battens being similar to those used on the seams of the bulkhead; that this bulkhead ran to each side to the shell plating of the steamer;

4. That the after end of No. 3 tween deck consisted of a bulkhead made of steel in the way of the hatch hereinafter referred to; that this after bulkhead in the wings was constructed of planks of the same description as the forward bulkhead with battens nailed over the place on each side where the planks came together in the same way as battens [fol. 523] on the forward bulkhead, except that in the case of the after bulkhead the planks ran horizontally instead of vertically, that there were not any separation cloths attached to it and there was a door constructed in it on each side leading to the tween deck cross bunker; that through the top and bottom of this compartment, being the shelter and tween decks, respectively, was a hatchway located in the middle of the ship about 18 feet wide running forward from the steel bulkhead at the after end of the compartment approximately 15½ feet, thus making an opening approximately 15½ feet by 18 feet; that there was a grain feeder built of wood and full of grain running through the hatchways and through the compartment and built against the steel bulkhead extending from side to side of the hatchway and running from the hatchway forward less than half the length of the hatchway already described; that this No. 3

tween deck compartment is ventilated by two telescopic ventilators which are located on either side of the hatchway 6-7 feet out from the side of the hatchway and about 23 feet aft of the forward bulkhead; that the openings of these ventilators into this compartment were approximately 12 to 14 inches in diameter;

5. That No. 3 lower hold was filled with grain and the hatch over No. 3 tween deck was covered with hatches and that two tarpaulins were battened down over it.

Assuming all of these facts will you state whether or not No. 3 tween deck was a proper and safe compartment in which to load and carry coal?

A. It was.

Q. Mr. Burke, assume in addition to the facts contained [fol. 524] in the hypothetical question already stated to you the following facts:

1. That on August 25, 1926, there remained about 160 tons of coal out of 360 tons of Morrisdale coal which had been put into this No. 3 tween deck compartment on June 30, 1926, and that the 160 tons of coal which remained were in a pile against the forward bulkhead running up to within 3 feet of the top of the compartment and sloping aft to about 3 feet forward of the forward hatch coaming and slanting down from the sides of the ship to close to the sides of the hatch coaming.

2. That upon careful inspection by the Chief Engineer before loading any additional coal the 160 tons of coal remaining were found cool and showed no signs of heating, will you say whether or not it would be a safe and prudent thing to load an additional 160 tons of Morrisdale coal on top of the coal remaining since June 30th assuming that all the coal in No. 3 tween deck would be discharged from the steamer in 16 days, or shortly thereafter?

A. It would.

Q. Mr. Burke, assuming all the facts stated in both hypothetical questions, will you state whether or not it is usual and customary in the Port of New York to carry coal on other ships in similar places to the No. 3 tween deck, in the "Galileo", as described to you?

A. It is.

Q. Mr. Burke, are you familiar with the ordinary coal bunkers on ships, permanent bunkers, cross bunkers, and so forth?

A. I am.

Q. Are they air-tight?

A. Never any I have seen.

Q. What is the usual type of permanent coal bunker used [fol. 525] on a ship?

A. Well, one usual type is side bunkers. Another usual type is cross bunkers. Now, side bunkers—you want them described separately?

Q. No, that is all right. Now, are all the sides of those bunkers made of water-tight steel?

A. They are not. The steel is water-tight, but the workmanship is not.

Q. In your experience, what part of a bunker is ever water-tight?

A. What part of a bunker is water-tight?

Q. What part of a bunker is ever water-tight and air-tight?

A. I don't know of any.

Q. What about the case where one of the water-tight bulkhead forms part of the bunker?

A. That might be. That particular bulkhead might be water-tight except in the way of your door. The chances are the bulkhead next to your water-tight bulkhead wouldn't be water-tight.

Q. In other words, they don't put the water-tight bulkheads close together?

A. Not usually, except as it has been built as a combination deep tank and bunker.

Q. Where are the openings in the bunkers?

A. To the fire room?

Q. Yes, where are they?

A. In the bulkhead.

Q. What sort of opening?

A. It depends whether it is a water-tight bulkhead. If it is, it is fitted with a water-tight door; and then it may be fitted with an ordinary slide, or may merely be fitted with cleats—well, a batten for holding wood strips across—usually something to back up the coal.

Q. To keep——

A. To keep the coal from running out. Cleats are their usual construction in order to hold wood battens.

[fol. 526] Q. In your experience have you ever seen a water-tight door used in a bunker which hasn't a water-tight bulkhead?

A. No, sir, it would be of no use, because they have practically no door in it. The bulkheads are usually opening to another compartment, and the water-tight door would be of no use, sir.

Q. What about the bunkers in those single beam vessels? Are those bunkers air-tight?

A. No, sir.

Q. Why not?

A. They couldn't be. Their coal is lying on wood slatting, which is not usually caulked, just tightly laid, possibly stripped.

Q. Do you know what the purpose of ventilators is in a place where they carry coal?

A. The purpose of the ventilator usually is to keep fresh air in your bunker and to carry away your gas.

Q. Is it for surface ventilation?

A. It is for surface ventilation, to carry away the gas on the top.

Q. Any other purpose that you know of?

A. Not that I know of.

Q. What have you to say with reference to this particular bunker space on the "Galileo", with reference to its safety? If you have any views, I wish you would explain them and tell us why you think it is safe?

A. Well, it is a usual place to carry coal. Your coal is only piled, it isn't in a very deep pile, good dry space, two ventilators leading down to it.

Q. To the surface?

A. To the surface of it.

Q. Any proximity to heat?

A. No, sir.

Q. Is that one of the things an engineer on a vessel has to watch against?

A. Yes, sir. In fact, the only fires I had was in bunkers close to boilers.

[fol. 527] Q. And the heat from the boilers would heat the coal?

A. I have an idea that had a lot to do with it—between that and a hot pipe.

Q. Now, a telescopic ventilator would ventilate the bottom of a hold?

A. It would not.

Q. What would it ventilate?

A. The surface.

Q. The opening is in the top?

A. In the top.

Q. Any opening in the bottom?

A. No, sir.

Q. Mr. Burke, whose duty is it on a coal-burning steamer to inspect the coal?

A. The chief engineer's.

Q. Anybody else?

A. Well, it is usually left to the chief engineer and the first assistant, or sometimes the second assistant—usually takes another assistant along with him when he goes around.

Q. Now, if the coal is actually found to be hot is there any question but what it ought to come out.

A. Certainly. No question about that.

Q. No question about that?

A. No question about that.

Q. Would you consider the right thing to do would be to throw away any coal that has been in a ship two months?

A. To do what with it?

Q. Throw it away?

A. No, sir, not if it was in good condition. If heated, you could still save it, cool it, taking it out.

Q. Take it out of that space and cool it?

A. Cool it. It wouldn't be necessary to throw it away.

Q. Now, if the coal on inspection was perfectly cool, any objection you can see to putting new coal on it, provided all the coal that is put in this space is to come out in less than three weeks?

A. Not at all.

Q. What is the practice as to that on board steamer?

A. If your coal is in good condition with a pile of 6 or 7 feet you don't bother with it—up to 10 feet you wouldn't [fol. 528] bother with it—just load on top of it as it is.

Q. What is the practice about having a system on a ship to use up the old coal first? Would you approve of that?

A. Well, if you can do it you usually work your bunkers around. You can't always use the oldest coal first. You usually work your bunkers around so as not to leave them in too great a length of time, so you won't lose your heat units. If the coal gets old you can't get the heat units out of it.

Q. Mr. Burke, in your experience do you know whether all coal is subject to spontaneous combustion, new and old?

A. In my experience I think it all is.

Cross-examination.

By Mr. Jones:

Q. Mr. Burke, did you ever make a study of the spontaneous combustion of coal?

A. Sir?

Q. Mr. Burke, did you ever make a study of the spontaneous combustion of coal?

A. Not particularly, no, sir.

Q. You don't consider yourself an expert on the subject, however, do you?

A. Not an expert on combustion; not spontaneous combustion.

Q. Nor do you consider yourself qualified to say whether or not a particular pile of coal is likely to undergo spontaneous combustion?

A. That is all as far as ship's bunkers and studying is concerned.

Q. Let us get this straight. I don't want to talk at cross purposes with you. Do you consider yourself qualified to testify as to whether or not coal put into a ship's bunkers is likely to undergo spontaneous combustion?

[fol. 529] A. Most any coal you can put in a ship's bunker is liable to do it. You have to watch it.

Q. I think you have conceded that you aren't an expert on the subject.

A. No, I am not an expert. I said that.

Q. So you aren't qualified to testify that a given space on a ship is a safe place for coal to be stowed?

A. Oh, I am, as far as safe places on a ship are concerned.

Q. What is the difference between a safe place on a ship for the stowage of coal and a safe place on land for the stowage of coal?

A. What is the difference?

Q. Yes.

A. There is none.

Q. What elements do you think should be taken into consideration in determining whether or not a place is safe for the stowage of coal?

A. I don't——

Q. What factor should be taken into consideration to determine whether any given place, whether on land or on shipboard, is a safe place to stow coal?

A. On shipboard any place that is not too promiscuous, not adjacent to hot boilers or hot steam pipes, running along the bulkhead.

Q. Don't you know or do you know that the absorption of oxygen by coal is what causes spontaneous combustion?

A. I have read all the theory of it, that is all.

Q. I show you a steam boiler engineering publication by the Heine Safety Boiler Company. That is a recognized standard book, isn't it?

A. I believe it is.

Q. I call your attention to page 469 of this book, published in the year 1920, in which they say:

"According to the Bureau of Mines, the following precautions should be observed in storing coal: (1) Do not [fol. 530] pile in cones; pile evenly not over 12 feet, and so that any point in the interior will not be over 10 feet from an air cooled surface. (2) If possible, store only screened nut coal. (3) Keep out the dust as much as possible by reducing the handling to a minimum. (4) Pile so that lump and fine sizes are distributed evenly, not allowing lumps to roll to the bottom and form air passages. (5) Rehandle and screen after two months. (6) Do not store near outside heat sources, even though moderate in degree. (7) After mining, allow six weeks' seasoning before storing. (8) Avoid alternate wetting and drying. (9) Prevent air reaching the interior of the pile by avoiding interstices around timbers and brickwork, or through porous bottoms, such as coarse cinders. (10) Do not attempt to ventilate with pipes as they may do more harm than good."

Do you agree that those precautions should be taken?

A. Those are good theoretical precautions, but if you had to take them on a steamship, they would have to become all oil-burners.

Q. They are all practical precautions?

A. All tests taken, but not on a ship, however.

Q. I show you a pamphlet called Factors in the Spontaneous Combustion of Coal, by O. P. Hood, published by the Bureau of Mines, Department of the Interior, Washington, Government Printing Office, 1922, and I ask you if that is regarded as a standard work on the subject?

A. I believe that probably would be right. Different tests have ben taken——

Q. Now the conclusion reached in this pamphlet by the Government is this, at page 8, under the heading, "Access of Oxygen—Ventilation: There are many more factors of minor importance——"

[fol. 531] The Court: What is the use of reading?

Mr. Jones: I will tell the witness that the conclusion reached by the Government——

Mr. Keating: I object to this statement of the conclusion reached by the Government.

The Court: Will you state what the conclusion is?

Mr. Keating: This publication, if your Honor please, has entirely to do with tremendous piles of coal on land, and coal piles of this size on land—two and three thousand tons of coal—and Mr. Jones is trying to read all these miscellaneous pamphlets into the record.

Mr. Jones: I offer it in evidence, and there is no distinction.

Mr. Keating: I object.

Mr. Jones: I am cross examining the witness and I am certain——

Mr. Keating: Mr. Jones is trying to read all this into the record. This isn't cross examination at all; it is an attempt to get this pamphlet before this Court.

Mr. Jones: If your Honor please, I think it is clear that all the authorities on the subject, everybody who has given it any consideration at all, have all come to this one conclusion: that through ventilation, absorption of oxygen, is what causes these fires, and the practice of these men going on in their own way, against the recommendation of the Board of Trade, against the recommendation of Lloyds, against the recommendation of the United States Govern-
[fol. 532] ment, people who are employed by the public to investigate this subject, have produced these fires and will

continue to produce disaster. I am quite within my rights when I call all this to the witness' attention. He states himself as an expert on this subject of spontaneous combustion. He doesn't know anything about it at all, and I am testing his knowledge by referring to authorities and asking him what he——

The Court: I didn't understand him to testify as an expert. He has testified as an expert on the practice and customs of trade. He hasn't attempted to tell me the science, and I sustain the objection.

Mr. Jones: He has testified this place was safe.

The Court: But he knows nothing of the science. He has only testified of experience.

Mr. Jones: Then I move to strike out his testimony about the place being safe. How can he testify about the place being safe when he knows nothing of the question of ventilation and the danger of combustion?

The Court: Just from experience. I deny your motion to strike it out and give you an exception.

Mr. Jones: I offer the pamphlet as an official publication of the United States Government.

Mr. Keating: I object to it. I have no opportunity to cross-examine Mr. Hood, whoever he may be, or Mr. Albert B. Fall.

[fol. 533] The Court: I am not a jury, Mr. Keating; you don't need to emphasize that.

I don't think it is of any use. They don't dispute that fires are caused by oxygen combining with coal, so as to generate heat, and this oxygen is gotten exclusively from the air. I don't see much trouble in finding specific findings that will be agreeable to both of you on that point.

Mr. Jones: The finding I want your Honor to find is that it was unsafe.

Mr. Keating: It doesn't mention the work bunker in the whole pamphlet, and what he says wouldn't have any particular——

Mr. Jones: This witness says there is no difference between the general principle of stowage on land and on shipboard. What could there be? It doesn't matter whether the factors operate aboard the ship or in a house.

The Court: I don't think there is any question but that spontaneous fires are caused by air getting into coal piles.

No question about that. The only question is what is needed in the way of due caution to prevent. Now, sometimes, as one of your witnesses testified, fires occur when nobody can explain what the contributing cause was at all. Other times fires occur by spontaneous combustion when anyone could see what caused it. Now, my job is merely to determine whether the precautions taken in this case were reasonably careful, and I don't think it is necessary at all to go further into the science.

[fol. 534] Mr. Jones: I think, if your Honor please, the science is quite plain, and what the reasonable precautions are are quite plain.

The Court: Of course, if you have evidence on that point I will take it. Does it say anything about closed spaces like bunkers?

Mr. Jones: Your Honor can read the pamphlet. It is quite plain. I would like to have the pamphlet marked for identification.

The Court: Oh, certainly, mark it for identification. Have you ever heard of this pamphlet before?

The Witness: Yes, I have.

The Court: You have read it before?

The Witness: Yes.

The Court: Is it a recognized authority?

The Witness: It is made from tests that have been made, but I couldn't get from it just exactly the percentage of oxygen.

The Court: That is enough, thank you.

The Witness: Eventually that percentage of oxygen, in order to——

The Court: Don't say anything more, please.

(The pamphlet was marked for identification Exhibit 28.)

Q. You know, do you not, that beginning with 1875 there have been various investigations to ascertain the causes of the frequent fires on shipboard in coal?

A. Yes, sir.

Q. And that the whole subject has become one of recog-[fol. 535] nized danger of fire in ship's bunkers in coal?

A. Been largely dealt with, yes, sir.

Q. And you know that this matter of fire on shipboard, in coal, is regarded as a serious danger, don't you?

A. Yes, sir.

Q. And that there have been a large number of such fires?

A. There have.

Q. And you know that Lloyds have made a special investigation and made special recommendations as to what should be done on shipboard with respect to preventing these fires?

A. Yes, sir. Most of your pamphlet deals with coal cargoes, not actual bunkers.

Q. "Coal bunkers and cargoes," this says. I am reading from Exhibit 16: "The Chairman having been requested that the question of the occurrence of fires in coal bunkers should be looked into——"

A. Yes, sir.

The Court: That is Milton's book?

Mr. Jones: I would say that this man is not an expert at all, your Honor. All he has testified to is his own experience. It is a limited experience, and I don't think he is qualified to testify.

Mr. Keating: Mr. Jones assumes that nobody can learn anything except out of books; and, unless written by a college professor, they don't mean anything. Now, I think that a man's practical experience is as good and full as somebody filling some chair in the college library.

The Court: Mr. Jones, this man admits he knows nothing about the science.

By the Court:

Q. Do you know anything about the science?

A. No, sir.

[fol. 536] The Court: His testimony is admitted solely on his observations. It isn't necessary to test him further on the science.

Mr. Jones: I am not testing him on the science, if your Honor please. I am going to ask him certain definite questions. I am going to ask him if he agrees with certain recommendations made by the gentleman.

By Mr. Jones:

Q. Recommendation No. 5 by Mr. Milton is:

"To minimize the absorption of oxygen by the coal in reserve bunkers, or in any bunker in which men are not actu-

ally working, the lower doors should be kept absolutely closed, so as to prevent any current of air whatever passing through the bunker and into the mass of coals."

Do you agree with that recommendation?

A. Your door is usually kept shut, but I don't see where it makes any difference as regards oxygen passing through the coal. The ordinary reserve bunker is usually a side bunker, usually in the way of the engine-room space, forward portion of the engine-room space, and it has practically got no bottom in it because your bilge limbers are open all the way through, so you have air coming up through the wooden ceiling all the way along there.

Q. Do you agree that that recommendation should be followed?

A. It is followed; that is, always followed except when you are using that bunker. Your reservation bunker is used as such.

Q. You can read No. 5 and tell me whether or not that should be followed or should not be followed?

A. That is right.

[fol. 537] Q. You think it should be followed—the recommendation should be followed?

A. The reserve bunker when not working should be closed, but it doesn't prevent oxygen from going through the body of your coal.

Q. Well, then, we will go on: Recommendation No. 9: "Where bunkers are over gutterways, and so forth, special care should be taken that the limbers are tight. Several fires have originated in bunkers just over the limbers, and there is reason to suppose that they have been caused by air circulating through the coal and coming from the limbers." Do you agree with that statement?

A. That is approximately correct.

Q. And you think that the gutterways should be made tight?

A. I have never known them to be made tight.

Q. But you think they should be tight, to get a safe place to store coal?

A. It is a safe place to store.

Q. But you think it should be made tight in order to obtain a safe place to store coal, don't you?

A. According to the extremes carried out. According to my experience on a ship, no.

Q. Mr. Milton also recommends that "If any coal is left in the bunker when a fresh charge has to be taken in, it should be trimmed into a position to insure its being used on the next voyage. It cannot be too strongly impressed upon those responsible that danger of over-heating and spontaneous combustion increases with the length of time the coal remains in the ship." Do you agree with that statement?

A. If it is high enough and everything is agreeable to it, it should be pulled down; but if in good shape, it isn't necessary.

[fol. 538] Mr. Jones: If your Honor please, I make a formal offer of this document. I offer in evidence this printed publication, issued by the Government Printing Office at Washington, and which is a paper produced from the files of the Department of the Interior, an executive department of the United States, entitled "Technical paper 311. Department of the Interior, Bureau of Mines. Factors in the Spontaneous Combustion of Coal," by O. H. Hood, and bearing the printed seal of the Department of the Interior. This publication, at page 1, specifically refers to spontaneous combustion on shipboard.

Mr. Keating: I object to that on the ground that it is incompetent, irrelevant and immaterial, what someone in the Department——

The Court: I will sustain the objection and give you an exception.

Mr. Jones: I ask that it be marked in evidence.

(Marked Exhibit 28 in evidence.)

Mr. Jones: You don't dispute that it came from the files of the Department of the Interior?

Mr. Keating: I don't think so, if it is the same as our own.

(Witness excused.)

[fol. 539] Fletcher Holman Starr, called as a witness on behalf of the respondent, having been duly sworn, testified as follows:

Direct examination.

By Mr. Keating:

Q. Mr. Starr, will you state to the Court your education and experience?

A. I graduated from the United States Naval Academy, taking while there the standard courses, which include not only the deck work of navigation and gunnery, but also engineering. I graduated as a past midshipman, went through the various grades, ensign, junior and senior lieutenants, Lieutenant Commander and Commander. I resigned my commission after the war as a Commander. My total naval experience is 16 years.

My experience after leaving the Naval Academy included both engineering and what we call line duty. Line duty may be either gunnery or navigation, technical radio, or any of the other duties on board ship. At the time there was no specialization in engineering. Every line officer took an engineering examination at each promotion. So, in addition to the engineering duty to which I was assigned in the normal course of my duty, I had to keep abreast of engineering and in constant touch with engineering. My engineering duties included assistant engineer on three battleships, chief assistant engineer on another, chief engineer on a gunboat, and chief engineer on a battleship, and also had special work in engineering at the Government Testing Plant in Philadelphia.

Q. What kind of testing?

A. Fuel oil; that is, after the ships began to change to oil.

[fol. 540] When I left the service as a Commander I was qualified to be a chief engineer on a battleship, one of coal or oil, and to take command of a cruiser, cargo ship, collier, or any one of the smaller naval vessels.

Q. Since you resigned from the Navy what have you been doing?

A. When I left the Navy I took up the profession of consulting engineer on combustion, which I have carried over for the last seven or eight years. That has included the burning of fuel gas, oil, powdered coal, and quite a little to do with coal efficiency tests under boilers. It has thrown me in touch with power plants on shore.

Q. Where is your office?

A. In the Atlantic Building, in Philadelphia.

Q. Will you state what your experience was with coal at sea?

A. I had to do everything that could possibly be done with coal at sea. In our practice cruise as midshipman we actually acted as coal passers in the coal bunkers, putting coal from the place aft of the bunker doors out to the boilers, firing the boilers, operating derricks in the colliers, inspecting bunkers; everything that has to do with coal I went through in one form or another at various times.

Q. Will you describe the method of bunkering naval vessels?

A. In naval vessels the procedure is: That when you are going to take coal—when you are informed you are going to take coal—the chief engineer and generally an assistant goes through the various bunkers to make an accurate estimate of the amount of coal on board. That must be very carefully calculated because the ships are rated on an efficiency basis, and each pound of coal is very precious. So an inspection is made by going into the bunkers, and [fol. 541] as many of the bunkers are worked in ships, it is very hard to make an accurate estimate and very involved. The old coal in the bunkers, especially the reserve bunkers, is leveled practically level before the new coal is put in. Now, in the service bunkers down in the fire room, at the fire floor level, any sweepings or old coal is generally shoveled toward the door to allow room for the new coal to come in.

Q. Do you ever throw old coal away?

A. No.

Q. What is the practice of the storage of new coal on top of old?

A. In the United States Navy I don't think there has ever been a naval ship bunker where new coal hasn't been put on top of old coal.

Q. Is that the usual practice?

A. Yes, sir.

Q. And what is the practice of using up the old coal first?

A. The regulations have always called for the use of the old coal first, if practical. The only place it is practical are in the service bunkers, which open right into the fire room.

It would be very difficult and almost impossible to get all the coal out of the reserve bunkers, and the shorter part through the wing bunkers and down into the service bunkers, that open into the fire room. It would be so impracticable that it is never attempted.

Q. Do you consider that the practice of storing new coal on top of old coal is a bad practice?

A. Not in any way, provided the old coal is properly inspected.

Q. What do you mean by "properly inspected"?

A. Inspected for a condition which makes itself known primarily by temperature. If there had been an over-heating it would be determined possibly by giving off a gas [fol. 542] that could be smelled or the actual temperature of the coal. We used to simply dig our hands down into the coal to see whether it was hot or not.

Q. If it was hot——

A. If it wasn't hot we would trim the new coal over the old coal. If there was any sign of it being hot we would, before we put any new coal in there, take out all the coal we thought might be at a hot spot and throw it out on to the fire room floor or spare bunker or on the deck to cool off. It would cool off in a few hours. Coals having been cooled, there is no danger in restoring the coal.

Q. Mr. Starr, what have you to say about bunker surface ventilation?

A. Theoretically there should be only surface ventilation in a bunker, and surface ventilation means the most adequate ventilation you can supply upon the coal. On a fore and aft bunker you have two ventilators, one in the forward end and one in the aft. These ventilators would open above the coal. The coal would never be loaded above the end of the deck beams, supporting the deck above, so there would be air space for ventilation. In additions, on some of the bunkers, where practical, we would even cut in through the bulkhead at the top, over the coal, to permit air going in and sweeping across the coal. On the thwartship bunker it was obviously impracticable to have ventilators fore and aft, abreast, on the other side, the other end of the thwartship bunkers, the practical plan being to have your two ventilators as far apart as you could in the space.

Q. There is no magic about putting them at one end and the other end, is there?

A. The theory is that it is entirely to relieve it from gases [fol. 543] which might be explosive when mixed with the proper proportion of air, and you best relieve the bunker of these gases by having the two ventilators cover the largest area, so they are safest further apart than close together. Other than surface ventilation, there should be theoretically no other ventilation in the bunker.

Q. Have you ever found that condition?

A. I have only seen that condition in one bunker. We had a reserve bunker on a ship of the Nebraska class, which is quite an old battleship. It had storage for about 100 tons of coal, and had no ventilation. It had a bunker plate on deck. That coal was placed there to be used as a last resort, in case we had used everything else. The way we handled that bunker was to take off the bunker plate once a week for about an hour. That was the surface ventilation of that bunker. That is the only bunker that I would have called absolutely airtight.

Q. Has surface ventilation anything to do with spontaneous combustion?

A. From my experience and everything I have been able to read and study, surface ventilation not only has nothing to do with spontaneous combustion, either in its generation or consummation, but is actually useful in stopping spontaneous combustion; and the Navy regulations recommend that where coal is showing signs of heating, not only the ventilators are put wide open, but the hatches are taken off to provide extra cooling for the coal.

Q. In your experience have you ever seen wooden bulkheads used in the carriage of coal?

A. Oh, a great many.

Q. What have you to say about that?

A. A wooden bulkhead on board ship is simply used to [fol. 544] give flexibility to a particular space, whether it is cargo or coal. I don't think anyone would prefer a wooden bulkhead to a steel bulkhead, but on a Navy collier or any other kind of auxiliary ship, if you had a space or bunkers, one time you might want to carry stores of various sizes and at other times stores of various other sizes. The wooden bulkhead is the only answer to give the flexible space for storage, and wooden bulkheads have always been used

for that purpose. As far as I know, they still are. I haven't had any experience in the last couple of years.

Q. Now, you heard me describe the wooden bulkhead on the "Galileo" in No. 3 tween decks in my hypothetical question. You were present both times when I read it?

A. Yes.

Q. What is your opinion with respect to that bulkhead as described?

A. I believe that is a very substantial construction, strong, and a perfectly suitable bulkhead for the purpose.

Q. Have you seen other similar bulkheads?

A. Yes.

Q. What is the purpose of those wooden bulkheads at sea?

A. Just as I have said, to give flexibility to the cargo space or the storage space. I am explaining that with a little effort a wooden bulkhead can be knocked down in two or three hours and set up 10 feet further forward, and being equally strong, and a steel bulkhead can be moved only at a shipyard.

Q. Are steel bulkheads, other than water-tight bulkheads, air-tight?

A. No, a water-tight bulkhead automatically means air-tightness and means more than that. It means strength to resist water pressure if the compartment is punctured. It doesn't really mean air-tight. It means a safety bulkhead [fol. 545] against the inrush of water in case something hapened to your ship.

Q. Any other bulkhead other than a water-tight bulkhead, air-tight?

A. No, there is no attempt made to make it air-tight unless there is some special reason.

Q. What would you say was a safe bunker on a cargo vessel such as the one on the "Galileo"?

A. Theoretically there is no such thing as a safe bunker. Bituminous coal is uncertain and dangerous. Practically any bunker is safe that is away from a source of heat, and inspected properly, and with sufficient frequency. With surface ventilation, that question of safety is entirely a matter of the efficiency of your sea-going personnel. There is no such thing as a safe powder magazine. We carry thousands of pounds of gun cotton, and if that gun cotton

isn't inspected the magazine isn't safe. If coal isn't inspected, I don't care what the storage is aboard ship, it isn't a safe bunker.

Q. You mean the safety of a bunker depends upon the inspection?

A. Yes, depends on the proper inspection. I might add something to that: The theory is, hot coal or warm coal is very much more apt to generate spontaneous combustion than cool coal. Well, as everyone knows, when you get to sea, especially down in the Tropics, you have certain bunkers which you must keep below 90 degrees, say even 120 degrees, and when you are in a situation where you have got to go through the Tropics and have got to use certain bunker space assigned to you, you are simply more alert in your inspection and careful to see it is in good condition, and a little more quick to move it if it shows signs of over-heating.

[fol. 546] Q. Now, just what causes the spontaneous combustion of coal, Mr. Starr?

A. Before I answer that I would like to say I am not an expert chemical engineer. I have taken chemistry and used a certain amount of chemistry as an engineer, but I have not run such extended tests as Professor Parr has described, but I have read most of the available stuff on it and think that qualifies me. I will not answer the question if Mr. Jones objects.

Mr. Jones: I don't object.

A. (Continuing:) Spontaneous combustion of coal is the chemical action caused by the absorption of oxygen by the coal itself.

Q. Is the absorption greater at the higher temperature?

A. As the temperature increases the absorption is much more rapid.

Q. Is it usually a slow or quick process?

A. It is very hard to answer that. Normally, starting on normal coal under normal temperatures, it is a slow process.

By the Court:

Q. What methods have they for ascertaining the temperature of coal in a pile?

A. The only way you can get the real temperature is to put down a portion of pipe in each pile and then lower a thermometer down inside the pipe.

Q. Is that done in the Navy?

A. In the Navy today the bunkers are fitted with thermometers, alongside of which are placed the record and ordinary temperature. I don't think this is carried out in the Merchants Service, and the Navy is always willing to [fol. 547] spend more money. Sometimes in a new bunker there has been a hot spot which has taken—I know of one case—it takes about two weeks to find it. We smelled the gas from this one hot spot.

Q. You can smell gas when coal is getting hot?

A. I have never heated coal to get the gas, but I have smelled gas from hot coal several times, and it was my impression, until Mr. Porter testified, that all coals give off gases you can smell. All hot coals I have been in touch with give off gases which you can smell.

Q. What is the ordinary way in the Navy of determining whether coal was hot or not, in the absence of those thermometers?

A. We simply crawled over it after it had been leveled off; dig our hands in. Of course it is very closely confined, and you can always get a faint odor of gas or feel the actual temperature.

By Mr. Keating:

Q. Mr. Starr, you heard me read the hypothetical question?

A. With reference to the bunker space?

Q. With reference to the bunker space before it had any coal in it at all.

A. Yes, sir.

Q. Would you or wouldn't you have considered that a dangerous place in which to store coal in June, 1926, assuming there was no coal in it at that time?

A. I wouldn't have assumed it a dangerous place to store coal.

Q. Would you have stored the coal?

A. If I had been the commanding officer or the chief engineer of the vessel.

Q. Assuming the coal was in that space from June 30th to August 26th, and that there remained of the original coal [fol. 548] 160 tons and it was proposed to carry 200 tons of additional coal, what would you have done with respect to the 160 tons of coal remaining from the June voyage, in August, 1926?

A. Well, based entirely on my naval experience, I would have leveled that coal off and taken the new coal on top of it, and the reason why I would have leveled off would be to get an accurate estimate of the amount of coal in there.

Q. Would you have made an inspection of the coal before you put the new coal in?

A. Absolutely; gone over every foot of it.

Q. And after the inspection you made, would you have considered it safe, assuming that your inspection didn't show that the old coal was hot, would you have considered it safe and a proper thing to load that additional 200 tons in that space?

A. Certainly.

Q. If the coal remaining in the bunker space No. 3 between decks wasn't heating and was cool on August 26th, 1926, would that have been any indication as to the safety or the dangers of the space in which it was carried?

A. If you assume that coal was loaded in there in the latter part of June and stayed cool until August 26th, from my experience it would be a very normal assumption that that would be a very good place to store coal.

Q. Are you familiar with Lloyds instructions?

A. I have read Lloyds instructions.

Q. Do you know the purpose of those instructions?

Mr. Jones: I object.

The Court: Overruled, with an exception.

A. The purpose of Lloyds instructions——

[fol. 549] Q. Do you know what the purpose is?

A. The purpose of Lloyds——

Mr. Jones: I object to it. Yes or no is the answer.

Q. In this one particular please obey Mr. Jones. Do you know or do you not?

A. I think I do.

Mr. Jones: I object to that, your Honor. The witness says he thinks he knows.

The Witness: I never talked with the man who wrote the instructions.

The Court: But do you know how they are used generally?

The Witness: Yes.

The Court: I will allow it and give you an exception.

A. The purpose of Lloyds instructions is a guide to mariners, both navigating and engineering, to try to improve sea-going practice, and they give, as far as I know from my sea-going experience, the theoretically perfect goal which you try to attain in handling your ship and running your engines—setting your goal in everything else pertaining to going to sea.

Q. They aim at perfection?

A. They give you the best knowledge available at the moment, toward which end you should strive in handling your ship.

Q. Are you familiar with Morrisdale coal, Mr. Starr?

A. Perfectly.

Q. Would the fact that Morrisdale coal was used in the bunkers on the "Galileo" affect any of the answers in your previous testimony?

A. Not at all.

[fol. 550] Q. Is Morrisdale coal bunker coal?

A. Yes.

Q. Have you had any personal experience with spontaneous combustion on ships?

A. I have never had experience with a coal fire.

Q. What about hot spots?

A. I have had experience with several hot spots.

Q. How did you find them?

A. Generally by smelling, occasionally by temperature. In each case during a bunker inspection.

Q. First of all, if the coal is hot and you smell gas it ought to be taken out. No question about that?

A. Absolutely none.

Q. And an inspection would determine the condition of the coal, would it not?

A. Yes.

Q. Any magic about making an inspection?

A. None that I know of.

Q. Is that within the knowledge of the ordinary chief engineer?

A. I don't see how a man could get his chief's license without knowing so.

Q. Are you familiar with the Bureau of Mines publication on the subject of spontaneous combustion?

A. I have read it.

Q. Do you know the purpose of this publication?

Mr. Jones: I object.

A. I do.

Mr. Jones: The publication speaks for itself. It is hearsay.

The Court: Lloyds isn't used in a particular trade. Have you read that?

The Witness: Yes.

The Court: Is there anything in there with which you disagree?

[fol. 551] The Witness: Not theoretically, no.

The Court: I would like to have this in evidence.

Mr. Keating: I will agree to it.

(Marked for identification Exhibit 28.)

Q. You said to his Honor in answer to his question which he asked you with respect to Exhibit 28, that there was nothing with which you disagreed in theory in this pamphlet. Will you explain to his Honor what you meant by your answer?

A. I meant by that answer that that pamphlet is clearly the latest and best thought on the causes of spontaneous combustion and the prevention, elimination of gas, and gives you an ideal to which you are trying to approach in your coal storage whether ashore—this is chiefly ashore, but it would apply afloat in theory.

The Court: We will take a recess until 2:15.

Recess until 2:15 P. M.

Met pursuant to adjournment at 2:15 P. M.
Present: As before.

FLETCHER HOLMAN STARR resumed the stand.

Direct examination.

By Mr. Keating (continued):

Q. Mr. Starr, will you assume that in No. 3 'tween deck space on the "Galileo", as described to you in the hypothetical questions, a hot spot to be developed in the coal [fol. 552] which lay in a slanting pile against the starboard side of the vessel, abreast of the hatch, the hatch being about 17 feet from the forward wooden bulkhead; will you state whether any air passage through the wooden bulkhead could have had any effect on this hot spot either in generating it or increasing it after it had started?

A. Any air leaking through the wooden bulkhead under no set of circumstances that I can possibly conceive could have ever started a hot spot or added anything to such hot spot which formed abreast of the hatch or even with the hatch on the starboard side of the ship.

Q. Why not?

A. The very nature of the coal itself is such that it will pack so that air under no real pressure would in any case seek the easiest path to the atmosphere. Even with air from a blower at high velocity would not get back through there, through 15 feet of packed coal.

Q. I think, Mr. Starr, it was testified by Mr. Margarelli at least that the hot spot that he put his hand on, or the vicinity of the hot spot, was on the starboard side of the vessel about abreast of the hatch, I think that is what he said. If there was heating in that portion of the coal that I have described to you, the pile slanting up backward toward the forward end of the compartment, where would the air come from, in your opinion, which would reach that particular spot?

A. It would be much more apt to come from the 'tween deck itself. The air against the face of that slanting pile would be more apt to cause a hot spot than any other air you could get into the pile.

Q. Does the point of the fire as described by Mr. Margarelli enable you to form any opinion as to the air coming through the bulkhead?

[fol. 553] A. Well, only the opinion that whatever air came through would have nothing to do with the fire which started from a hot spot abreast of the hatch.

Q. That spot was too far away from the bulkhead?

A. Definitely, yes.

Q. Mr. Starr, in considering the subject of theoretical perfection, what would you say to the use of anthracite coal on cargo vessels in bunkers?

A. Anthracite coal would be a very fool-proof, safe fuel to use.

Q. What about its suitability for steaming the vessel?

A. Anthracite coal is used only on yachts, but due to its expense primarily it is never used in any other service that I have ever heard of.

Q. What about its firing qualities?

A. You can't expect, without the special equipment, to get the capacity out of the boiler with anthracite that you can with bituminous.

Q. Would you recommend the using of anthracite coal for cargo vessels?

A. Certainly not.

Q. Mr. Starr, I show you Exhibit No. 27, which was Mr. Laverie's sketch of a coal bunker, this space "A" being the lower hold, "B" tween decks, and "C" the shelter deck. These lines marked "X-Y," "T-S," and "M-N" are described as beams. Now I want to know whether in an ordinary bunker on a ship there is a bunker that goes all the way down?

A. Ordinarily there are hatches or chutes cut through what I call a through bunker, that is, a bunker where these compartments are vertical. There would be a communicating hatch or chute through the center at some point of the deck, which these beams support. In filling this bunker you have to keep these hatches open because after the coal is exhausted the only way you can get to B hatch would [fol. 554] be to get on to B deck, above the coal, and open that hatch, on deck supported with beam marked X-Y, and similarly use the coal in C. You would have to give a clear passage to the hatch that was to let the coal drop from B into A.

Q. If there is any air gotten into that bunker at the line X-Y or the line T-S, would that get into the coal?

A. Absolutely.

Q. Any question about that?

A. None whatever.

Q. Is there any way of keeping that air out if those beams aren't tight?

A. Those beams aren't tight. There is no way to keep the air out. There is no way of keeping the air out if the service door is kept open (indicating the bunker marked A), the bunker at the fire floor level.

The Court: It is the practice to take the coal out of the lower bunker first?

The Witness: You have to unless you drop it down to this service door and then it is handled out on the fire floor.

Q. Mr. Starr, when you put coal into a bunker is there any air in there before you put the coal in?

A. Naturally.

Q. Do you know of any coal bunker that is built where the air is all pumped out before they put the coal in?

A. No.

Cross-examination.

By Mr. Jones:

Q. Mr. Starr, from one of the answers which you gave in the earlier part of your testimony, I take it that you refer to some rule or regulation in the Navy with respect to not putting coal in the same compartment where there [fol. 555] was a magazine for the stowage of powder?

A. No, sir, I certainly didn't mean to say that, and I think you must have misunderstood. I compared a safe coal bunker to a safe magazine.

Q. You have testified to piling coal up around a magazine which you have constructed for the stowage of powder?

A. Both powder and bituminous coal are necessarily dangerous. There would be no reason for putting the two things next to each other.

Q. They should be separated?

A. Absolutely.

Q. Now, Mr. Keating asked you some questions with respect to the location of a hot spot. I show you a drawing which is a part of Exhibit No. 14, showing the area around which the deck was distorted on the "Galileo"

after the vessel was examined, after she was raised. Would you say that indicated fire originating in the vicinity of the wooden bulkhead?

A. If I am—I am asked to accept this plan as accurately representing the damage?

Q. Yes.

A. This plan represents that the hottest fire was in the part indicated by the dotted line.

Q. And it indicates the fire did originate in that area somewhere?

A. Not necessarily.

Q. There is no indication of fire outside that area?

A. Drawn on this plan?

Q. Yes.

A. No, not on this plan. I didn't inspect the ship.

Q. With that plan before you, taking that as an assumption of facts, that indicates that the fire did originate in the vicinity of the wooden bulkhead?

A. If there is no other effect of fire in this space, it clearly indicates that the fire was localized here and this [fol. 556] is where it originated and was hottest.

Q. Now, I understand you to say, and if I am wrong, please correct me, because I don't want to get facts on the record that are contrary to what you wish to testify to, but I understand you to say that you agreed with something that was said by Professor Parr, that when coal reached a temperature around or above 90 degrees, that you considered that a dangerous point?

A. I said that close up to 120 degrees—some authorities only say to 90, but the service regulations say that when coal reaches 120 degrees, then it becomes dangerous and that it must be watched closely.

Q. That is what I had in mind.

A. Yes.

Q. You don't mean to suggest that you can tell when coal reaches 120 degrees by putting your hands on it?

A. I don't mean to suggest that I can record temperature through my fingers.

Q. I don't think any other man would want to suggest that. Now, would you consider it safe or prudent to put a new stock of coal on top of old coal?

A. I have to qualify that answer. If I were permitted to inspect carefully the old coal I would think it perfectly safe to put new coal on top of it.

Q. By careful inspection I assume you mean by driving pipes down into the coal to get the temperature all the way through the mass of coal?

A. Depending upon the depth of the coal, your inspection would depend. In this particular case, assuming a depth of 7 feet, in a slanting pile, I would have personally satisfied myself if I could have run my fingers into it and smelled along the face of the coal. I would have considered I had given it a practical inspection for conditions.

[fol. 557] Q. Will such an inspection indicate the presence of a hot spot 7 feet down in the pile?

A. My definition of a hot spot would certainly be indicated by such an inspection. A hot spot may mean one thing to me and another thing to somebody else.

Q. Now, your testimony came as somewhat of a surprise to me in one particular, that is, what you said with respect to placing new coal over old coal. The reason why it came as a surprise was because that is a subject that has been in litigation before and seems to be pretty well established in the law books that this is a most negligent and dangerous thing to do.

Mr. Keating: No, your Honor, I object to that statement by Mr. Jones. I dispute it also.

The Court: Strike it out.

Mr. Jones: As I understand it, your Honor, in cross-examination I am permitted to show the witness such facts as I see them.

The Court: I am not going into collateral issues at this point. It is stricken out, and I will give you an exception.

Q. Do you know, Mr. Starr, that it is generally considered a dangerous practice to put new coal on top of the old coal?

A. My knowledge is that it is very usual practice to do it. That has never been demonstrated to be dangerous in my experience at sea; that there are no records, at least, in the Navy, to prove it dangerous, and therefore I can't see why it is dangerous.

[fol. 558] Mr. Jones: I move to strike out the answer as not responsive. I asked the witness——

The Court: I will let the answer stand, with an exception.

Q. Don't you know, Mr. Starr, that it is generally considered a dangerous practice to put new coal on top of old coal?

A. My answer is no.

Q. Have you known of any cases of spontaneous combustion in the Navy?

A. A great many cases.

By the Court:

Q. Is there any regulation at all in regard to putting new coal on top of old coal?

A. The regulations say that the old coal shall be arranged in the bunkers to be used first. Like other regulations, it is not always possible to do that. It might take days to move the coal around so that every bit of old coal would be used before the new.

Q. Is there a regulation in regard to putting new coal on top of old?

A. Not specifically. Regulations simply say that old coal shall be used first.

By Mr. Jones:

Q. If the new coal is put on top of the old coal obviously the old coal cannot be used first?

A. Obviously the first coal will be used first.

Q. If you put the new on top of the old?

A. Yes.

Q. Don't you have to remove the new before the——

A. The old comes out before the first.

[fol. 559] Q. What I am putting to you is this: Where you have a hold, which is on an incline, running toward a hatchway, and the coal is piled against a bulkhead, and other coal is put in in front of that coal over a hatchway which runs to a lower deck, isn't it obvious in the arrangement that the new coal must be used first to get at the old coal?

A. Yes, it is obvious that the new coal would be, if used through the hatchway.

Q. Or used through the passageway leading into the compartment?

A. Yes.

Q. You are familiar with the way this compartment was constructed?

A. With the only exception that the doors in the after bunker, which would permit access to the old coal first or part of the old coal——

Q. I show you Exhibit 11, showing you how the compartment was constructed, the passageway on the starboard side, and the passageway on the port side. Coal was piled against the wooden bulkhead shown in the sketch and I imagine extended on the starboard side and the port side, and new coal was put around the center on the old coal. Isn't it obvious that if coal is moved through the passageway it would have to be new coal which would be removed before you could use the old coal?

A. With the exception of the amount of old coal against the door, which would have to be used, yes.

Q. With respect to the coal that was slipping up toward the compartment?

A. That would have to be used last.

Q. And the coal so stored wouldn't be in accordance with Navy regulations?

A. Coal so stored wouldn't meet the regulations with reference to the placing of old coal in such a position that it would be used first.

[fol. 560] Q. Quite so. I am certain we understand your testimony unless you—do you mean to say that through ventilation of a pile of coal isn't dangerous?

A. What do you mean by through ventilation?

Q. By permitting air to pass through the body of the coal?

A. How much air?

Q. The amount of air that could enter a bulkhead, and through the cracks of a wooden bulkhead.

A. How much would that be?

Q. (Continued.) And permit the oxidation of a patch of a pile of coal?

A. The reason I go into detail and want to know is: Through ventilation is one of the safest ventilations if you have enough of it.

Q. That is, if it is extensive? In other words, what I mean to say is this: If you have a bulkhead which rests

in a slot, in which the beams rest on the deck, permitting air to pass underneath, also permitting a certain amount of air to pass through the cracks of the bulkhead, do you mean to suggest that such an admission of air to the mass of the coal isn't dangerous?

A. I don't think anybody can say, Mr. Jones.

By the Court:

Q. Do you know how this bulkhead was made?

A. Yes, but I don't know how big the cracks were.

Q. Assume that they were put close together; there would be some air?

A. I couldn't honestly conceive of air getting through a so-called dustproof bulkhead, made the way that one was made, in sufficient quantity to even approach causing the fire that happened on the "Galileo," and I have been studying [fol. 561] this thing for a year and a half.

By Mr. Jones:

Q. Now, Mr. Starr, I call your attention to a book called "Steam Boiler Engineering", published by the Heine Safety Boiler Company, and I ask you whether this is recognized as a standard book in the enginering world?

A. Yes, sir.

Q. I call your attention to page 467 of that book and I will read a paragraph and ask you whether you agree with it: "Spontaneous combustion of coal is due to slow oxidation in an air supply sufficient to support the oxidation, but insufficient to carry away all the heat formed. The friability of the coal, or its tendency to break up into fine particles and dust, as well as its chemical nature, are the major causes of spontaneous combustion." Do you agree with that statement?

A. I agree, except with the friability of coal being the cause of spontaneous combustion.

Q. But you agree that sufficient air to support oxidation but insufficient to carry away all the heat formed is a major cause?

A. Yes, beyond any question.

Q. Spontaneous combustion is due to the slow oxidation in the air supply, sufficient to support the oxidation, but insufficient to carry away all the heat formed?

A. Yes, sir.

Q. That you consider the major cause of spontaneous combustion in coal?

A. Yes, sir.

Q. Then, as I take it, what you recommend is either a sufficient ventilation to keep the coal cool under all circumstances or no air supply at all to the body of the coal?

[fol. 562] A. That is theoretically correct. That would be a theoretically perfect condition.

Q. Mr. Starr, it is entirely feasible to build an airtight wooden bulkhead so that bulkhead would be quite airtight, say from 3 feet from the deck to the deck below, isn't it?

A. You mean aboard ship?

Q. Aboard ship?

A. I have never seen——

Q. I didn't say what you have seen. I mean it is feasible?

A. No, it is not.

Q. You could have your wooden beams on which your bulkhead depends for its support attached to the deck plating so you could get a perfect fit?

A. Until the ship works.

Q. And one of the witnesses referred to putting, I think, white lead on to make a tight joint; that could be done?

A. Yes, sir.

Q. And you would have a tight joint?

A. When you build it.

Q. And you could put paper over it, I think one of the witnesses referred to putting heavy tar paper?

A. Yes, sir.

Q. That could be done?

A. That would help to make it tight.

Q. So you could make a tight bulkhead by the expenditure of comparatively little money, couldn't you?

A. (No answer.)

Q. That is true, isn't it?

A. That depends on what you mean by tightness. You couldn't make a wooden bulkhead tight.

Q. You could make it——

A. Dust-proof.

Q. But practically tight if you had done what I said, couldn't you?

A. At the time you did it it would be practically air-tight.

[fol. 563] Q. Now, the expense of doing that isn't very great?

A. What you suggest—paper?

Q. Yes.

A. That isn't very great.

Q. Now referring to those cowl ventilators which you mentioned: Isn't it a fact that unless you have one ventilator in the forward part of the compartment and another in the after part of the compartment, that you get practically no circulation in the compartment throughout the whole compartment?

A. No, sir.

Q. On the surface, I mean.

A. No, sir.

Q. Assume you have both your ventilators in the after part of the compartment, is it your suggestion that you will have circulation of air in the forward part of that compartment?

A. How wide is the compartment?

Q. 50 feet width.

A. I mean, how long?

Q. 33 feet.

A. And I——

Q. The ventilators being placed 23 feet and 8 or 10 inches abaft the forward wooden bulkhead and I should say about 8 feet forward of the after wooden bulkhead?

The Court: It would be 10 feet, wouldn't it?

Mr. Jones: It would be 10 feet, that is right.

A. Between 9 and 10 feet? Am I asked whether the ventilators in the position you give me—whether or not surface ventilation would be perfect?

Q. Yes.

A. It would not be perfect.

Q. Would be as good as if you had a ventilator in the forward part as well as in the after part of the compartment?

A. Would that location of ventilators be as good as the [fol. 564] ventilators forward and aft in line, amidships?

Q. Yes.

A. The thwartship ventilation would be better.

Q. Now, the Board of Trade has recommended that ventilators be placed in the opposite ends of the compartments.

A. Yes, sir.

Q. And that is a regulation, and by that you understand fore and aft.

A. Yes.

Q. So you disagree with the Board of Trade?

A. I don't understand that they mean fore and aft in a thwartship compartment that is comparatively narrow.

Q. Isn't it true that ventilators on board ships are built so that the movement of the ship through the water supplies the current of air that is admitted to the compartment by ventilators?

A. Yes; it is equally true that with a direct wind you get a movement from port to port and starboard to starboard, and may be a month at sea and never get a movement.

Q. Isn't it true that the movement of air is in the opposite direction in which the mouth——

A. It depends on the way you trim your ventilators and how your ventilators are ranked.

Q. Isn't it obvious that the reason the ventilators are put in the forward and aft ends of compartments is that the movement of the ship itself furnishes the draft to trim the ventilators?

A. I think that fore and aft ventilators in any one compartment on board ships I am familiar with is due more to the shape of the compartment itself than to the movement of the vessel, the idea being to cover as large an area of that compartment with a limited number of ventilators.

Q. Did you ever see a wooden bulkhead on any man of [fol. 565] war of the United States Navy in the bunker space?

A. If you mean by man of war any naval vessel; yes.

Q. What naval vessel? I mean what commissioned man of war did you ever see that in?

A. Supply ships, colliers and, during the war, transports.

Q. They are not commissioned ships, are they?

A. Certainly; commanded by line officers.

Q. But you never saw any ship of the line, any fighting ship?

A. No, sir.

Redirect examination.

By Mr. Keating:

Q. Mr. Starr, you were asked to look at Exhibit 14, and especially the diagram at the fag end, around which there are certain dotted lines. Mr. Starr, suppose the cargo plan of the ship shows that in No. 2 'tween deck forward of that wooden bulkhead was stowed a considerable quantity of lard, has the area of fire—has the heat got anything to do with the area of the fire where the greatest evidences of fire are?

A. If the intensity — the actual flame temperature is shown right there.

Q. Would the fact that lard was stowed on the cargo side of No. 2 'tween deck account for such area as shown on this exhibit?

A. I think it would have quite a lot to do with the hottest point of that fire.

Q. Which burns with greater heat: coal or lard?

A. It depends entirely how you supply air for combustion, but, normally, a lard fire would be hotter than the surface of a coal bed which wasn't getting much air through the bed.

(Witness excused.)

[fol. 566] WILLIAM P. BRAKENBURY, called as a witness on behalf of the respondent, having been duly sworn, testified as follows:

Direct examination.

By Mr. Keating:

Q. Mr. Brakenbury, what is your business?

A. Engineer.

Q. By whom are you employed?

A. Ellerman's Wilson Line, Limited, Hull.

Q. Where is your headquarters?

A. Hull.

Q. Will you state, Mr. Brakenbury, what your experience has been which has led up to your present position?

A. Well, I commenced as a boy. I went as an apprentice to an engineering shop, after which I went to sea for about four to five years. During that time I had certificates and, after leaving the sea, just shortly after I left the ship, I went into a drawing office. And shortly afterwards I sat for the examination of the British Board of Trade, extra engineer's certificate.

Q. How long have you held a chief engineer's certificate?

A. About thirty odd years.

Q. Did you ever go to sea with that certificate?

A. Yes.

Q. How many years did you serve at sea as chief engineer?

A. I never served at sea as a chief engineer.

Q. How many years did you go to sea as an engineer?

A. About four to five.

Q. How long have you held your present position?

A. As general superintendent?

Q. Yes.

A. About five years.

Q. Mr. Brakenbury, I show you Exhibit 18. Will you look at this exhibit and indicate to me in the vicinity of [fol. 567] No. 3 'tween deck and No. 2 'tween deck where there is a water-tight bulkhead?

A. Water-tight bulkhead here.

Q. Now, we will mark that water-tight bulkhead XY, indicating the water-tight bulkhead in the 'tween deck; is that correct?

A. XY, yes.

Q. And the bulkhead goes all the way down through X to the tank top, which we will mark Z. Now, am I right, Mr. Brakenbury, that the line X-Z represents a water-tight bulkhead on the "Galileo"?

A. Yes, sir; that is right.

Q. Will you mark the next water-tight bulkhead forward of that point? Just indicate it to me.

A. (Witness indicates.)

Q. We will mark that R-S.

A. The first water-tight bulkhead is at Frame No. 100, the next at Frame 147.

Q. Do I understand you to say that the bulkhead at Frame 147, indicated by the line R-S, runs through the beam of the ship up through the 'tween deck?

A. Up to that deck, up to the point R.

Q. What is the distance between those two water-tight bulkheads in the 'tween decks?

A. 105 feet and 9 inches.

Q. That approximately?

A. 47 transverse members.

Q. What is the distance between the frames?

A. 2 feet 3.

Q. Approximately 105 feet 9 inches?

A. Right. There is only about 84 feet here. Something wrong with it. 47 frame transverse members between 100 and 147.

The Court: Something happened to the scale?

Mr. Keating: It is almost impossible to take those photo-
[fol. 568] graphs without distorting the plan.

Mr. Jones: You figure that to be 105 feet 9 inches?

The Witness: Yes.

The Court: The scale isn't exactly right?

Mr. Jones: Mr. Brakenbury wants to check up.

The Court: 47 frames?

Mr. Keating: Suppose you measure it out.

The Witness: 104, 105 feet.

Mr. Keating: I ask that the original of this plan be marked in evidence.

(Same was received in evidence and marked Respondent's Exhibit 18-B.)

(Third copy of plan offered in evidence, received and marked Respondent's Exhibit 18-C.)

By Mr. Keating:

Q. Mr. Brackenbury, looking at Exhibit 18-B, starting at the part you have marked——

Mr. Jones: Did he satisfy himself as to the measurements?

Mr. Keating: Yes.

Q. (Continued.) —on here X-Y, which I understood according to your testimony was the water-tight bulkhead in the 'tween decks.

A. That is right.

Q. What other obstruction was there in that space, start-
[fol. 569] ing at X-Y?

A. There is a steel bulkhead at frame 106.
Q. Is that permanent?
A. That is a permanent bulkhead.
Q. Is it a water-tight bulkhead?
A. No.
Q. Is there any other permanent structure in the space up to the point of the bulkhead marked R-S?
A. No.
Q. In other words, that space that you have indicated is an open space from water-tight bulkhead to water-tight bulkhead, except for the steel bulkhead in the way of the hatch?
A. Yes.
Q. Now, that particular compartment had a wooden bulkhead about in the position which has been marked on this drawing C-D?
A. That is right. That is 33 feet 9, forward of that.

The Court: Forward of what?
The Witness: Of the bulkhead.

By Mr. Keating:

Q. Forward of the bulkhead marked P-P?
A. Of frame 120.

Mr. Jones: The wooden bulkhead is marked B-E, not C-D. That is in the 'tween deck and A-B is in the shelter deck.

By Mr. Keating:

Q. Do you remember when that bulkhead C-D was put in the ship?
A. Yes.
Q. Has it been there a long or a short time?
A. A long time.
Q. Now, disregarding the wooden bulkhead C-D, that space is served by two hatches, isn't it?
[fol. 570] A. This hatch is called No. 3 and this is called the No. 2 hatch.
Q. And we will mark that No. 2 and No. 3 with those figures. Now, how many ventilators were there in the two spaces?
A. Four in those spaces altogether.

Q. That is from the water-tight bulkhead R-S to the water-tight bulkhead X-Y?

A. Yes.

Q. Four ventilators as shown on the plan?

A. There is four ventilators to that point.

Q. Four ventilators to the point P-P?

A. Four ventilators from the bulkhead P-P to the water-tight bulkhead at frame 147.

Q. Which is marked R-S?

A. Yes.

Q. And then from the bulkhead P-P to the bulkhead X-Y how many additional?

A. Two bunker ventilators.

Q. Mr. Brakenbury, what are your duties in connection with the engineers on the various vessels of the Ellermans Wilson Line?

A. Well, every ship that comes into Hull, the engineer brings in his report for the voyage, into the office.

Q. Is that a report in writing?

A. A report in his own writing.

Mr. Keating: We will produce that report in the morning.

A. (Continued.) And I go over his reports when he brings them in and we discuss various matters arising in the voyage in the usual manner, that is, the amount of coal consumed—that is totaled and brought down and the quality of the coal, and the amount remaining, so that it can be decided what coal she will require for the next voyage. That particular coal arrangement is done separately by the [fol. 571] coal department. They bunker the ship, depending upon the amount of coal that is on board. They leave it to me whether they should have two or three days' reservation, depending upon the length of the voyage, and I get the total makeup.

In addition to that, the chief engineers bring requisitions for repairs, of repairs that have occurred during the voyage, either outward or homeward—any painting or other things that is not necessary to get done in a foreign port. The orders are sent to the workshop for the various repairs to be executed. In addition to that he brings in a list, a store list of stores that are necessary in an engine room. All that

is the duty of the engineer when he first comes in and that is done with every engineer on every ship.

Q. And you did that, Mr. Brakenbury, on all the voyages of the "Galileo"?

A. On her voyages when she came to Hull.

Q. Did you see the "Galileo" in the fall of 1925 in Hull or Newcastle?

A. I saw her in Hull but not in Newcastle.

Q. Had she undergone any repairs?

A. No. When she arrived in Hull we ordered a freezing machine. We were going to extend the refrigeration. I was on the ship three or four times for the fitting of the pipes, and space to put the new machine, and so forth.

Q. What time are you talking about?

A. I am talking of the Fall of 1925. I am talking of November, 1925. That is the last voyage it was in on in 1925. This machine was on order. I was on the ship several times with the draughtsmen, telling them what to do and stating where to put the various parts and subsequently to make a drawing.

[fol. 572] Q. In November, 1925, did you give Mr. Oxterby any written instructions about the care of his coal?

A. Yes; I handed him a form letter I had drawn up a few weeks previously.

Q. Is that a copy, Exhibit G, of the instructions you gave him?

A. Yes, that is quite correct.

Q. How did you give this to Mr. Oxterby?

A. I gave it by hand, personally.

Q. Did you ever discuss coal with Mr. Oxterby, other than written instructions?

A. Well, no more than I had discussed with all the engineers.

Q. I don't care what you did with the others. What did you do with Mr. Oxterby?

A. Every voyage when he came up we discussed the matter of coal loaded on board, also the condition of it, and every time impressed on his mind that one of his chief jobs —which is the ordinary routine of a chief engineer—was to look after his coal.

Q. What do you mean?

A. To see that nothing had to be done with it. It is entirely common sense. If there is any heating of the coal to have it removed, either removed or taken off the ship.

Q. Mr. Brackenbury, how long have you known Mr. Oxterby?

A. Well, I have known him over twenty odd years; fully that.

Q. Up until recently did you regard him as a competent engineer?

A. I regard him as a very competent engineer now—as an engineer.

Q. Did you prior to June, 1926, Mr. Brakenbury, with regard to the "Galileo" and the other ships in the Hull-New York run—where did you bunker them for the run?

A. We bunkered them in Hull.

Q. And where did you carry your surplus coal?

A. In the No. 3 tween deck, in the lower hold.

Q. Is there a wooden bulkhead in No. 3 tween deck?

A. Yes.

[fol. 573] Q. Is coal carried against it?

A. Yes.

Q. Did you have any trouble?

A. Never had any trouble that I know of.

Q. Did you know also that in June, 1926, there was a coal strike in England?

A. That is true.

Q. Did you have anything to do with the sending of instructions by cable, cable having been produced in evidence, Exhibit C, reading: "Bunker 'Galileo' round voyage"? Did you have anything to do with the sending of that cable?

A. No.

Q. You know nothing about it?

A. No, I didn't know the cable had gone, but there had been some talk about it.

Q. The matter was discussed?

A. The matter——

Q. Had you discussed the question of bunkering for the round voyage with Mr. Oxterby before he left for the June voyage?

A. No.

Q. You knew, didn't you, that you hadn't given him enough coal to get home?

A. On the June voyage the ship went to Rotterdam to take about 1,000 tons of coal there and it wasn't decided until after the ships had left that she was to be bunkered in New York for the round voyage, at least to my knowledge.

Q. Now, when she got back, following what I call the June

voyage, arriving in Hull, I think it has been testified, July 17th or thereabouts, did you go on board the vessel on her arrival back?

A. Yes, I was on the vessel several times.

Q. What were you doing?

A. In the ordinary way of duties. Going to see most of the ships whenever they come into Hull. We had to get the space all ready for the refrigerating machines on the next voyage she was scheduled to stop. She was to make another trip to New York and then we were going to fit the refriger- [fol. 574] ating machine when she came back from New York.

Q. Did you discuss the question of coal with Mr. Oxterby on that voyage, in Hull, before she came out to New York?

A. In the ordinary way we discussed the quality and what he had left and when he brought his report in.

Q. You went over his formal voyage report?

A. So it was, the formal voyage report.

Q. Who was it on the "Galileo" who had charge of the coal?

A. The chief engineer.

Q. Anybody else?

A. No.

Q. Did you go down in No. 3 tween deck and No. 3 shelter deck in Hull?

A. I don't know. I wouldn't like to say for certain. I am not sure of that.

Q. Did you know there was some coal in there?

A. Yes.

Q. You knew some coal had been carried in that space?

A. The chief engineer reported when he got to Hull that they carried coal in the No. 3 tween deck.

Q. And also No. 3 shelter deck?

A. Yes. Well, they always carried it more or less in there.

Q. How do No. 3 shelter deck and No. 3 tween deck compare as far as size?

A. The lower deck, No. 3 tween deck, is 33.9 long, and the shelter deck is 40.6 long.

Q. That is the only difference?

A. That is all, practically. Well, the shelter deck is 8.6 from deck head to deck head and the No. 3 tween deck is 10 feet.

Q. You have been carrying coal for a long time in No. 2 shelter deck against a wooden bulkhead forward, have you not?

A. In the shelter deck, yes.

[fol. 575] Q. No. 3, I should have said, instead of No. 2.

A. Yes.

Q. Have you been carrying coal?

A. Regularly in that space.

Q. Did you have any trouble with it on the "Galileo"?

A. No trouble at all.

Q. Can you state, Mr. Brakenbury, from your experience as an engineer whether or not it is usual and customary to carry your reserve bunkers, or coal in compartments, which are separated from cargo compartments by wooden bulkheads?

A. Well, it is a very common practice.

Q. Are you familiar with Mr. Milton's report, which is Exhibit 16?

A. Yes, I have read that report years ago, and I have read it since.

Q. And have you followed it right along through the years?

A. Well, it had not been modified through the years, except in 1927 there was a change, but is it approximately the same as to facts.

Q. Did your steamer undergo a survey by Lloyd's at any time between 1924 and 1926?

A. The vessel left Hull on the 22nd of November. She went to the Tyne, to discharge a Newcastle cargo and went into the dry dock, Palmer's Drydock, on November 25th.

Q. What year?

A. 1925. And while she was in the dry dock, she had received some damage at Halifax, specifications for the repairs were drawn up in Hull and put out for tender, and Palmer's got the order to do the work. She went into Palmer's Drydock, as I have previously mentioned, and while she was undergoing the repairs she was put through Lloyd's second No. 1 survey.

[fol. 576] Q. Is that one of the usual surveys?

A. It is one of the four years' special surveys.

Q. And following that survey did she get a certificate?

A. Oh, yes; she completed her survey before she left the Tyne.

Q. I show you Exhibit No. 17 entitled "Instructions to Surveyors, Board of Trade, Marine Department". Have you ever seen that circular before?

A. Yes, I am conversant with this.

Q. What does that pamphlet deal with, Mr. Brakenbury?

A. Surface ventilation of coal.

Q. What do you know about surface ventilation of coal?

A. Well, I know that it has been adopted by the Board of Trade, referring to that pamphlet, as the only ventilation necessary in a bunker, and it specifically instructs the surveyor to reject any through ventilation of coal by ventilators, that is, you can carry a ventilator down into the body of coal, that is, you have got to stop the ventilator at the deck head. The purpose of that ventilation is of course to carry explosive gas, marsh gas—CH^4—that is what the ventilators are for principally, to carry off the explosive gases.

Q. Where ought the ventilators to be put according to the pamphlet, Exhibit 17?

A. They should be of about the same size and placed at the opposite ends of the compartment or as far apart as practical.

Q. Is that the way the thing reads?

Mr. Jones: I object to that. The rule is: if he wants to give us the language of it——

Mr. Keating: No, it doesn't.

The Witness: It says here each hold or 'tween deck com- [fol. 577] partment in which coal is carried should be provided with at least two ventilators, one for inlet and the other for outlet. They should be of about the same size and placed at the opposite ends of the compartment or as far apart as practicable.

By Mr. Keating:

Q. Were the ventilators in No. 3 'tween deck placed as far apart as practicable on the "Galileo"?

Mr. Jones: That calls for a conclusion.

Mr. Keating: That deals with the construction of the ship.

The Court: I know where they were placed. I know they could have been placed further apart physically, but

whether it would be necessary to do so is another matter that you can ask him, if you wish.

By Mr. Keating:

Q. What have you to say about the ventilators leading down into No. 3 'tween deck as regard their positions?

A. Well, the positions of the ventilators are about 32 feet athwart, that is taken from that drawing—about 32 or 33 feet athwart.

Q. That is the distance between them?

A. That is the distance between the ventilators, and this space being only 33.9, obviously you have got a better draft of ventilators athwart than if forward and aft. Too, another point about those ventilators in this space: At the after end of this space there is a hatch 15.3 feet long and 18 feet wide. Well, to put those ventilators at the ends of this space you would have to put your bridge wing beyond [fol. 578] the center line of the ship to get any sense out of it. You couldn't put the aft ventilator through the arch. You have got to ship it to the side, so I consider the ventilators as shown on the plan much more efficient for surface ventilation than if they were put at the end. I don't think the Board of Trade would have taken any exception to this. As a matter of fact, they couldn't ask—the pamphlet is not retrospective. If you refer to page 9——

Q. Suppose you refer to it.

A. "Paragraph 18: Appliances at least as effective as those specified. Any ventilator or other appliance which, in the opinion of the Board of Trade, is at least as effective, in all respects, as an appliance specified in this circular, will be accepted as fulfilling the requirements of the circular." Now, I take it that that clause gives the surveyor a certain amount of latitude with regard to the position of those ventilators. That is my reading of it.

Q. Never had an explosion in this space, did you?

A. Never.

Q. The owners, that is the Ellermans Wilson Line, Limited, Hull, have you as a superintending engineer at Hull; is that correct?

A. I am; that is correct.

Q. Have you any assistants?

A. Yes, I have two assistants in Hull.

Q. Do they maintain a marine superintendent?

A. Yes.

Q. Has he any assistants?

A. One.

Q. Does the Ellermans Wilson Line have a marine superintendent in New York?

A. Oh, no, certainly not.

Q. Do they have a superintending engineer in New York?

A. No.

[fol. 579] Q. Who has to do with the coal, its stowage and care and inspection while the vessels are in New York?

A. The chief engineer.

Q. Anybody else have anything to do with it?

A. Not at all.

Q. Have you ever heard of a man named Isbister?

A. Well, I have heard his name once before I arrived in New York, and have heard it several times in this room. I have never seen him; I have never written him. But I understand that he is a sort of shore superintendent for the Ellermans Bucknell Line, but I have never done any business with him or given him any instructions.

Q. He has nothing to do with your department?

A. Nothing at all.

Q. Who runs your department?

A. I run it.

Q. Mr. Brakenbury, what have you to say about carrying or loading new coal on old coal?

A. Well, it is a practice which is almost universal. I am going to say certainly very, very common. The instructions I gave in that circular was to stop as much of that as possible—work each bunker——

Q. Now, you are referring to your instructions to Exhibit G?

A. That is right.

Q. What effect would your instructions have had if they were obeyed?

A. There couldn't be any coal kept in the ships for any length of time if they worked it around.

Q. Worked what around?

A. Bunker by bunker, alternately.

Q. How much coal does the "Galileo" burn in a round trip?

A. Averaging about 1400 to 1500 tons.

[fol. 580] Q. So every time she made a round voyage, including her stay in New York she used up 1500 tons of coal?

A. That is true.

Q. If the engineer, Mr. Oxterby, had used each bunker alternately, how long would it take him to exhaust all the coal on the ship?

A. Well, in the ordinary way, that is, to have nothing, I should think about a voyage and a half, that is, a complete round voyage and a half; he would be able to work right around the bunkers. That means in about 12 weeks, 11 or 12 weeks, all tne bunkers should have been skimmed right around.

Q. If your instructions had been obeyed?

A. Certainly.

Q. Did you follow the engineers to see that that was done?

A. I didn't follow them every voyage. They got their instructions to carry out and they would do it. One of the objects of that form was to get them to send in a return at the end of the year to find out how each and every ship stood with respect to the amount of coal on board and the time it had been on board. We had a sort of yearly balance sheet.

Q. Now, Mr. Brakenbury, do you approve or do you not approve of No. 3 'tween deck, as described, and as you have seen it, as a place to carry coal?

A. In my opinion I think it is a very good place to carry coal.

Q. Give your reasons.

A. Well, in the first place, for bunker coal, it is essential to have it in a position like that so you can get it through to your fires, and second is, it is 23 feet from the after end of that to the front of the bulkhead. It is a fairly long distance—it is the after end of the permanent cross bunker, forward side of the permanent cross bunker. It is in a [fol. 581] better and cooler place than the permanent bunker in the ship is.

Q. What about the place as a suitable place to prevent any undue air getting at the coal, except for surface ventilation? What would be that feature of the place?

A. Well, I understand that this is a wood bulkhead and they tell me you can't make a wood bulkhead absolutely

tight, but a bulkhead of the description described in this room, I think, would let a very, very small amount seep through.

By the Court:

Q. The forward bulkhead on the permanent bunker; was that made in the same way as this wooden bulkhead between 2 and 3 on the 'tween decks?

A. The forward bulkhead? The after bulkhead is steel.

Q. I mean the forward bulkhead of the permanent bunker. That is wood, isn't it?

A. The forward end of the bulkhead was wood.

Q. Was that made in the same way as the wooden bulkhead between 2 and 3 in the 'tween decks?

A. No, I didn't see those bulkheads for a long time, but I understand that in the case of the forward bulkhead, in No. 3, had a vertical plank and the after end had a horizontal plank.

Q. But aside from the way the planking was run, was the means of sealing the planks the same?

A. Yes; a batten at each side, that is, between each of the planks there was a batten nailed on each side, that is, the bulkhead between the permanent bunker and the extension, the No. 3 tween deck bulkhead, that cargo space—it was cargo space on the forward side of that bunker, sup- [fol. 582] posed to be a cargo space—and that ship was built with no bulkhead in it at all. The center of the hatch, as I said before, was built in with steel, and wings at the side, and that was the after end, the forward end of the permanent cross bunker.

Mr. Keating: Has your Honor got it perfectly clear that the bulkhead you inquired about was steel in the center and steel in the wings?

The Court: Oh, yes. I wanted to know if that was the regular permanent bunker, as I understand it.

The Witness: Oh, yes, sir.

By the Court:

Q. And on occasions in the past it was used as the sole bunker on the tween deck level?

A. That is so.

Q. And I was wondering whether the means of sealing it was the same as the sealing of the temporary bulkhead.

A. Yes. All the seams are battened in the same way.

By Mr. Keating:

Q. Whose duty on the "Galileo" was it to see that the forward wooden bulkhead was as tight as possible?

A. The chief officer.

Q. That is his particular job?

A. That is his job.

Q. Now, Mr. Brakenbury, if you had been present on August 24th or 25th, 1926, in New York, and you wanted to take some extra coal and you found with respect to No. [fol. 583] 3 shelter deck and No. 3 tween deck that there was some coal left there, we will assume it was 160 tons, what would you have done if you had been there yourself?

Mr. Jones: I object.

The Court: I sustain the objection.

Mr. Keating: Exception.

Q. Mr. Brakenbury, would you consider it safe and proper to load new coal into that compartment on top of 200 tons of old coal, provided a very careful inspection of the old coal was made and found not heating?

A. Yes, I think it is a very safe thing to do. It is the only thing you could do. After a careful inspection I don't see any reason why that new coal would not be put on top of the old coal.

Q. Now, if the inspection showed it was heating, what would be done?

A. It is a question of degree. If it was very warm and facilities on the ship permitted, the coal would be laid out to cool off and put back.

Q. Mr. Milton, as I recall, in Exhibit 16, makes the recommendation with respect to what should be done with fresh coal taken in on top of old coal. The recommendation is that the old coal should be trimmed into position so it will be used up first. Do you recall the recommendation I am referring to?

A. Yes.

Q. What have you to say? Do you agree with that?

A. I do, so far as those recommendations are made with the idea of doing the best possible under all circumstances. The recommendation also states that the coal has got to be moved into such a position that it can be used up on the next voyage. There are those considerations to be [fol. 584] taken in before you decide whether Mr. Milton's rule should be applied without any reservation. I don't altogether agree with Mr. Milton in some things he said. At least, the doors would have to be——

Q. I only want to confine this to the coal at the moment.

A. I agree with the recommendations that Mr. Milton made, so far as possible, but I don't think it is always necessary that coal should be taken out or even moved when you have got to put new coal on top of old. Under the circumstances of the "Galileo", I think we agreed with Mr. Milton's recommendation when he says it was to be taken on in such a position that it would come out in the next voyage.

Q. In other words, all the coal in No. 3 tween decks would have been taken out if the "Galileo" had finished her voyage which she started?

A. She sailed on the 29th of August; she would have been at Hull on the 14th of September; it would have been about the 17th of September, 20 days on the outside.

Q. Now, Mr. Milton suggests that it be used on the next voyage. Does he specify what the length of the next voyage is?

A. No, makes no specification of what it is.

Q. Was there anything more definite in the recommendation than the suggestion "Voyage"?

A. No, I don't think so.

Q. Are there any voyages that last to three and four weeks?

A. Oh, yes, sir; more than that even.

Q. What is the length of some of those far eastern voyages from New York, in days?

A. Forty days, something like that; it just depends on the speed of the ship.

[fol. 585] Q. Do you agree in principle with the suggestion that so far as possible the old coal should be worked out of the ship first?

A. Yes, I do.

Q. And in the instructions which you gave in November, 1925, to Mr. Oxterby, Exhibit G, did you attempt to carry that out?

A. Always.

Cross-examination.

By Mr. Jones:

Q. As I understand you, Mr. Brakenbury, you are in full charge of all the ships of the Ellermans Wilson Line, in so far as any matter relating to the bunkers are concerned?

A. Relating to the engineering department.

Q. You are the supreme authority of the company on coal?

A. I explained that in one of my answers. I didn't order the coal; I didn't put the coal on. It is dealt with by the coal department in Hull. I don't know what the coal department——

Q. But in so far as the engineering department on board your ships are concerned, you are the supreme authority of the Ellermans Wilson Line, Limited?

A. Yes, I am the superintending engineer.

Q. And any higher authority in the company in the engineering department?

A. No.

Q. You knew that the "Galileo" was using 'tween deck No. 3 for the purpose of carrying coal on the voyage June, 1926?

A. I knew that when she arrived in Hull.

Q. Who sent the cable from Hull respecting the 850 tons of coal that were to be carried by the "Francesco"?

A. I cannot tell you that.

Q. Some other person in the Ellermans Wilson Line than yourself?

A. Oh, certainly.

[fol. 586] Q. I mean who could do that there? Some other officer?

A. I don't know that.

Q. You weren't consulted about that?

A. Never mentioned.

Q. Now, in this Exhibit G; you say this is particularly drawn in this matter on account of recurrent fires taking

place in the bunkers of various steamers? I suppose you are familiar with the pamphlets published by the Board of Trade, in which there were some entries on fires as occurring in various bunkers on British ships?

A. I have read that; yes, sir.

Q. And was it that pamphlet you had in mind when referring to recurrent fires taking place in bunkers of various steamers?

A. No, I don't think it was

Q. Well, then, what did you have in mind as to recurring fires taking place on various steamers? Your own steamers?

A. No, very few.

Q. What steamers were they?

A. You are always reading in the technical papers and reports in the commercial papers of ships having bunker fires at sea. Also we had given instructions, verbal instructions, to the same effect as that letter. I designed that letter so as to crystallize those instructions, so that none of the men could have any excuse for not carrying out the instructions.

Q. Did you know that the danger of these bunker fires had grown to alarming proportions and therefore you sent that letter out?

A. I don't think there was such a bad period in 1925. 1921 was the worst time in the world for bunker fires.

Q. But the thing had gotten to such a position that you [fol. 587] felt it was necessary to warn people of the great danger that existed from those bunker fires: wasn't that it, Mr. Brakenbury?

A. That is so. Each one of my engineers got it.

Q. And the people in the steamships generally recognize the great danger from these bunker fires: that is correct, isn't it?

A. I wouldn't put it like that. Wherever you use coal there is danger and everybody connected with bunkers or working coal are alive to the danger.

Q. Then people became exercised in recent years about this danger, to eliminate it?

A. To some extent I believe they have.

Q. And it is perfectly feasible to eliminate, isn't it, Mr. Brakenbury?

A. Well, it is possible to do anything, but it may be very, very impracticable.

Q. The whole matter is a matter of expense, isn't it?

A. I didn't say that at all.

Q. One moment. You realize, do you not, if you were to have what I call through ventilation through the mass of coal, that you practically eliminate the danger of spontaneous combustion in coal?

A. Yes. I understand so.

Q. And you realize that it is entirely feasible and practicable to fill a bulkhead in a bunker that is air-tight?

A. It is possible. Everything is possible, but if you take an ordinary ship, any cargo ship or almost any ship you can speak of, there is not a single bunker on that ship that is water-tight.

Q. You know that in a steel bulkhead there is practically no air that goes through the steel bulkhead? *A.* Why not?

A. It is not water-tight.

Q. Any steel bulkhead after it has been in the ship accumulates a certain amount of rust, doesn't it?

A. It does, and corrodes.

[fol. 588] Q. And the only possible place for air to get through a steel bulkhead is where those plates on the sides of the bulkhead overlap?

A. But the seams——

Q. And the seams are riveted together?

A. Yes.

Q. And it rusts in between the seams; that is true?

A. To some extent.

Q. And in a short time it makes an air-tight wall?

A. I don't agree with you; not necessarily. I think you have no more right to ask if a non-water-tight bulkhead rusts tight than to assume that a water-tight wooden bulkhead will do the same thing with dust.

Q. Those steel plates are overlapped, aren't they?

A. Yes.

Q. And riveted together with steel rivets?

A. Yes.

Q. And the steel rivets are driven home so as to make as tight a joint as you can?

A. That is a matter of construction. That is quite right.

Q. Your wooden bulkhead is built that way?

A. No, not built like that.

Q. Now, in the matter of constructing the wooden bulkhead, it is entirely feasible to fit what I shall call the sill

piece so it fits on the deck and makes a close fit with the deck?

A. Certainly.

Q. And it is also entirely possible to cover the bulkhead with heavy paper, isn't it?

A. Well, it is feasible to do it but I prefer to have battens on a bulkhead.

Q. And it is also possible to make the bulkheads double?

A. You can do lots of things.

Q. That is true, isn't it, you can do it?

A. Yes, you can make a double bulkhead if you think it is necessary.

[fol. 589] Q. What is the explanation of constructing one of those bulkheads?

A. Well, in regard to the sill, as you are speaking about, I couldn't give you information. That bulkhead was built by the shipbuilding yard and by ship's carpenters and would be in first class shape. I have never seen a sill fitted to a ship's deck without being bedded.

The Court: Have you any recollection about this sill?

The Witness: Not the slightest.

By Mr. Jones:

Q. It should have been bedded, should it not?

A. I don't know. It should be bedded unless an equally good means is taken to make it tight.

Q. I say it should have been bedded?

A. I didn't say so; or an equal means of making the bottom tight. There are other ways. You could stem it with wood. I don't know how it was made.

Q. That is what should have been done but you don't know?

A. I don't know anything about that bulkhead.

Q. Now, when was this bulkhead put in the ship?

A. I don't know.

Q. What was the first knowledge you had of the extension of the bulkhead?

A. Several years.

Q. No, before this occurrence.

A. Oh, yes, sir.

Q. Now, you have told us about old coal—about new coal on top of old coal. Did you ever discuss that matter with Mr. Oxterby before this occurrence on the "Galileo"?

A. No, I never discussed that with him. That is a matter that comes in the province of an engineer; it is part [fol. 590] of his job and business. The coal is absolutely in his charge. It is his duty to go through the bunkers regularly and see, watch the coal and see it isn't heating and to take any steps that are required at sea, or in port, wherever he may be, to have coal moved if it may be necessary, and if it fired or got very hot to have it taken off. That is a job that is naturally in his province.

Q. Now, in this circular of October, 1925, you said, "Will you please note all bunker coal must be worked out of every bunker; consequently see that no coal shall be left in the bunker any length of time; also as each bunker is emptied it must be swept down of small coal and dross removed and burned." What was the purpose of that instruction?

A. To insure that they would carry out the verbal order that had been given them continuously for years. The purpose of that instruction was for to crystallize or to put on record the verbal instructions which the engineers have been used to get for years; for years back, and to have a record for them to send in. If you put it another way, to make it more of a system than it had been.

Q. So you had had some oral communications with Mr. Oxterby with respect to this matter of old coal, before you issued this circular of October, 1925, Exhibit G?

A. After—I thought you said about putting new coal on top of old coal. I don't think I had any talk with Mr. Oxterby about that except in the general way.

Q. Doesn't this circular deal with the matter of old coal?

A. Yes.

Q. Now, what is the purpose of sweeping up a bunker so that all small coal and dross should be removed, unless [fol. 591] there is some danger from putting new coal on old coal?

A. The idea, when you get a bunker and you sweep out all the small stuff. Everybody knows that is more liable to fire than lump coal, but there is nothing in that letter that can be inferred, in my opinion, nothing can be inferred that any engineer can take new coal on old. It may be worked out of a bunker alternately.

Q. You saw the coal that was taken here in New York in June on the "Galileo"?

A. I don't know as I saw it; I said I wasn't sure whether I was in the bunker.

Q. Now, Mr. Brakenbury, as a marine engineer in charge of all the operations of your company: when you switched from the coal which you had been in the habit of using to a new type of coal, do you mean you didn't examine the new type of coal your ships were using?

A. I think you are wrong. We had been using the same coal. We didn't switch from the Morrisdale coal.

Q. I must have formed an erroneous impression. Mr. Brakenbury, in reply to a question from Mr. Keating, I had the idea that up to this June voyage you had been using Newcastle or Hull coal and it wasn't until this June voyage that you used any American coal at all. Am I wrong?

A. Yes.

Q. So you had been using American coal during all that time and had been bunkering over in England?

A. No. Whenever the engineer was short he got whatever coal he required in New York, which was Morrisdale coal.

Q. You are familiar with the type of coal known as the Morrisdale coal?

A. Yes.

Q. And you know that it had a considerable number of finds in it, just as one of your men testified?

A. Yes.

Q. You said distinctly that you knew those finds were [fol. 592] liable to heat if other coal was placed on top of it?

A. I don't know of the extent of finds in this coal. I didn't accept this coal. The chief engineer reported to me when he arrived at Hull, that is July 17th I think he arrived at Hull, he left here June 30th, and he informed me that the coal had been put in the No. 3 tween deck bunker and that it was quite all right. I couldn't tell you from memory about the quality.

Q. You don't deny that you went on board the "Galileo" when she was at Hull in June, 1926?

A. I don't, no, but I will deny that I was ever in the bunker.

Mr. Jones: I move to strike out the latter part of his answer as not responsive.

The Court: I will allow it to stand and give you an exception.

By Mr. Jones:

Q. Coming to this question of ventilators: if you wanted to get the full use of the two ventilators, to get them as far apart as possible, couldn't you place them diagonally in the compartment?

A. Yes, it would leave two bad corners.

Q. What two bad corners would it leave?

A. Well, it just depends on the way you place the ventilators if you put them in the two corners, there wouldn't be ventilators in the other corners.

Q. Putting two ventilators in the after part leaves two bad corners in the forward part, doesn't it?

A. Yes, to some extent, yes.

Q. And as a matter of fact, you know you put four ventilators two on one side and two on the other, to get proper ventilation?

[fol. 593] A. I don't think you could mention any case. I think that is a very good position, as I previously said.

Q. You recognize, Mr. Brakenbury, that these ventilators weren't placed in accordance with the regulations of the Board of Trade?

A. Yes, they were when the ship was built.

Q. I call your attention to Exhibit 18-B and ask you what apparently is a ventilator.

A. That (indicating).

Q. Where does that ventilator lead?

A. Lead?

Q. Yes.

A. Leads down to No. 3 lower hold and No. 3 tween deck and No. 3 shelter deck.

Q. Then there is apparently another ventilator, Mr. Brakenbury. Where does that lead?

A. To the lower bunker, cross tween deck bunker, and shelter deck bunker.

Q. Now, what was the first time that you learned of the fact that Mr. Oxterby, as you say, hadn't told you the truth about the origin of this fire?

A. On October 25th, 1929.

Q. What did you do then?

A. What could I do?

Q. You could have discharged Mr. Oxterby if you were convinced he hadn't told you the truth.

A. He was on the "Sythia" when he told me this.

Q. I think you said October 25th. Of this year?

A. I said 1929.

Q. When did you first learn of the fact that this Magarelli man told you about this hot coal?

A. Magarelli didn't—what?

Q. When the Italian stevedore said the coal was hot.

A. Early 1928, perhaps middle of 1928.

Q. What did you do about it?

A. As soon as I saw Mr. Oxterby after that I pointed out to him the statement that Mr. Keating had sent to Hull regarding the Magarelli statement, and I told him "What [fol. 594] have you to say about that? Is this statement that Magarelli made true?" And he said, "No, there is not a word of truth to it." Now, I repeated that question within a month of leaving Hull. I repeated that question to him in the middle of August, and he had been waiting in Hull to come out here for this trial, and I never missed asking him that question because I wanted to be sure he was quite firm on what he was saying, and up to the morning of the 25th of October, 1929, I thought Mr. Oxterby was speaking the truth; and when we came up from breakfast on the morning of that day, and we were walking up toward the salon, he said, "I would like to speak to you." He came to my room and told me that what Magarelli had said was true.

The Court: What did he say was his reason for telling you?

The Witness: He didn't tell me, but he said he couldn't take his oath and give evidence and deny that statement of Magarelli.

By Mr. Jones:

Q. Did he say the coal was in fact hot or——

A. He told me the coal wasn't hot; the coal was slightly warmer, no warmer than usual, and why he made this statement he didn't know, excepting that he—I don't know; I can't answer for him at all, but I know this much: when he told me that I got a bit of a shock.

Q. Did you ask him why he made this misstatement to you?

A. Yes.

Q. What explanation did he give?

A. He had none to give.

[fol. 595] Q. What did you say to him?

A. I said it was a very serious matter and the first thing would be to get hold of Mr. Keating in New York. So I arranged instead of coming to New York with his ship to go ashore at Boston, on Sunday, October 27th.

Mr. Keating: You brought him to my office.

The Witness: Brought him to your office.

Mr. Keating: I got a shock too.

By Mr. Jones:

Q. Did you institute any investigation when you received the report as to this Italian stevedore's statement which was so contrary to Mr. Oxterby's, to ascertain which of the two was the truth?

A. I don't see how I could have made any investigation of the matter. Magarelli was in New York and Mr. Oxterby told me that Magarelli's statement was untrue and that is all I can tell you.

Q. Did you question any of the other engineers on the "Galileo"?

A. They knew nothing; I couldn't say whether I did or not.

Q. So far as you know, you said nothing about that to them?

A. Well, I only got the thing itself, Mr. Jones—I think your statement was sent to us March 31st, 1928—it was a long time floating about our place before I got hold of it, and last August when I saw it. The first time I saw the report, Mr. Oxterby was away then.

Q. I understand you to say that the first you knew of the Italian stevedore's report was some time in 1928. Now, you just told me that the first you knew of it was in the summer of 1929: is that correct?

A. No. I said 1928.

[fol. 596] Q. Now, when you say last summer you don't mean the summer just past; you mean the summer before?

A. Yes.

Q. So you had from the summer before last up to the present time to find out from those other engineers what they had to say?

A. I did nothing. I asked the engineer and took his word as a truthful man. Why should I doubt him?

Q. Well, you knew that the Italian stevedore stated to the contrary?

A. Yes. I will have to prefer Mr. Oxterby to the stevedore.

Q. In other words, you paid no attention whatever to the stevedore's statement?

A. What could I do? I asked Mr. Oxterby repeatedly whether that statement was true. When I say repeatedly, I asked him several times, and I had his assurance it wasn't true, that Magarelli had never spoken to him about that coal question.

Q. And you made no inquiry whatever of the other engineers on the ship as to what they knew about it?

A. No, I didn't.

Q. You have bunker fires on your other ships?

A. We have had bunker fires occasionally.

Q. Well, now, about this same period you had bunker fires on the "Morango"?

A. Yes.

Q. Did you tell Mr. Oxterby about those fires?

A. I don't know whether I did. I may have.

Q. You knew about them?

A. I knew there had been a fire.

Mr. Keating: The "Morango" fire happened afterwards, the 11th of October, 1926.

By Mr. Jones:

Q. On August 21st, 1926, page 15, there was coal on the port shelter deck very heated, working it out; that was [fol. 597] called to your attention, wasn't it, on the "Morango"?

A. Yes, I remember something about it.

Q. And there was an entry on August 23rd: "Engaged in working coal out of No. 3 on starboard side shelter deck. August 25th: Reached fire starboard side shelter deck No. 3. August 26th: Coal still heated on starboard side shelter deck. Engaged in working it out." You knew about that, didn't you?

A. I forget the details now.

Q. So you did have considerable trouble with fire in your shelter deck and tween deck with wooden bulkheads?

A. We never had any serious fire, but occasionally you always have—because of coal heating, you can't possibly carry coal in 60 ships without having places of heating and possibly some cases like the "Morango"; but never had a case of anything serious.

Q. Had the Ellermans Wilson Line 60 ships?

A. We had 60 ships at that time.

Q. The Ellermans Wilson had 60 ships during 1926?

A. Approximately 51. Those ships are run from our office. I am superintendent for those and I think it includes 51 ships at present. I would like to be clear; it may be one or two more or less, but I am speaking about 1926.

Q. You have told us about the New York-Boston-New castle run. What other services?

A. They trade all over the world.

Q. You have regular services?

A. Regular services up the Baltic; Scandinavia, Norway.

Q. They are short runs and small steamers?

A. Yes, sir.

Q. What other services?

A. Steamers up the Mediterranean, small and large.

[fol. 598] Q. That is a short service?

A. Pretty near as long a voyage as Hull to New York.

Q. How many ships have you in the Mediterranean service?

A. Possibly a dozen.

Q. How many in the New York service?

A. Four or five.

Q. What other services have you beside the Scandinavian, Baltic, Mediterranean, New York?

A. Bombay, Karachi, Calcutta and the Far East.

Q. Under what names do they operate?

A. Under the Ellermans Wilson.

Q. How many ships have you in that business?

A. Well, four sailing regularly to Bombay and the East.

Q. They are all just freight service?

A. Oh, no; we have a passenger service from Hull to Oslo.

Q. Coming to the fire you had on the "Morango", have you any explanation to offer why the fire occurred in the

"Morango" in the shelter deck near the bulkhead similar to the one you had on the "Galileo"?

A. I haven't.

Q. What do you do, Mr. Brakenbury, to see whether your instructions were followed?

A. Well, they send in a report at the end of the year.

Q. Did you ever go on board your ships to ascertain whether the report was correct or incorrect?

A. You must understand that a number of our ships don't come to Hull. They may be running out for months and in those cases we aren't able to visit the ships for months.

Q. You were interested only in the ships that run to Hull?

A. I am interested in all the ships.

Q. Did you go aboard the ships that run to Hull to ascertain——

A. I asked the engineers whether they are carrying out those instructions and I have always been assured they do. [fol. 599] Q. Did you never make an investigation of your own?

A. I couldn't go and see whether the bunker is cleaned out

Q. A man cannot sit in his office chair and never go anywhere and ask people questions: is that right?

A. You think I am a man sitting on a chair doing nothing? There is nothing that goes on on those ships that I don't go to see.

Q. Did you go aboard of your ships to see whether your instructions were carried out?

A. I went to see whether they were carried out; that included the coal as well.

Q. And you went on board the "Galileo" to see whether those instructions were carried out?

A. At various times.

Q. When she got there in July?

A. I was on board in July, yes.

Mr. Keating: If the Court please, I want to offer the deposition of John J. Chapman, chief engineer of the "Morango", deposition taken in this case with reference to the fire on the "Morango". I would like to state to your Honor that that fire occurred in the permanent bunker.

The Court: Have you any objection to this?

Mr. Jones: Oh, no, I cross examined the witness.

Mr. Keating: Mr. Jones brought an action in this Court arising out of the "Morango" fire. When the testimony was taken Mr. Jones abandoned his suit and the suit was discontinued by Mr. Jones.

The Court: What does that prove?

Mr. Keating: I move to strike out all reference to the [fol. 600] "Morango" fire in Mr. Jones's cross examination and, if your Honor will grant the motion, I will withdraw the deposition.

Mr. Jones: There were two "Morango" fires, one in the permanent bunker and one in the shelter deck. It has nothing to do with this situation. The shelter deck is in an entirely different place, and the fire occurred on August 21st, before this one.

Mr. Keating: I dispute that statement of fact. It wasn't in the shelter deck. It was up in the boiler room section.

The Court: Let the record stand as it is with everything in it that has not been objected to, and let it stand that way. If there is something else you want to offer in the way of evidence I will rule on it.

Mr. Keating: Everything that Mr. Jones said about the "Morango"? The deposition stays in?

The Court: I will allow it to stand as it is.

Mr. Keating: What about my statement that Mr. Jones brought an action?

The Court: That is out.

Mr. Keating: Mr. Jones, are we trying the Cudahy case as well?

Mr. Jones: I understand that before your Honor is also the case entitled Cudahy Brothers Company et al. against Ellermans Wilson Line, Limited, owner of the Steamship "Galileo", respondent, No. 134.

The Court: Stipulate both cases tried together?

Mr. Jones: Yes, sir.

[fol. 601] Mr. Keating: With respect to that case, your Honor, the bills of lading weren't put in and I find only three out of four bills of lading. May I have those marked in evidence with the understanding that when we get the other bill of lading——

Mr. Jones: I may be able to get that for you.

Mr. Keating: In the meantime, I offer them in evidence.

Mr. Jones: In addition I will stipulate that any missing bills of lading that you want to put in and I want to put in may be filed.

Where are the bills of lading issued by the steamer? These seem to be railroad bills of lading.

Mr. Keating: No, those are through bills of lading.

The Court: Let that rest for the moment.

Mr. Keating: With the understanding that I have an opportunity to put those bills of lading in when produced by Mr. Jones, and also producing those documents that I mentioned to Mr. Jones, I rest.

Mr. Jones: If your Honor please, I understood Mr. Keating was going to put Mr. Ellison back on the stand.

The Court: All right.

FREDERICK ELLISON, recalled by the respondent, further testified as follows:

Direct examination.

By Mr. Keating:

Q. Mr. Ellison, was the grain feeder that led down into the lower hold full of grain or not?

A. It was full of grain.

[fol. 602] Cross-examination.

By Mr. Jones:

Q. How many battens did you find were broken in August, 1926, when you looked at the bulkhead in No. 3 tween deck?

A. Well, I couldn't tell you.

Q. Can you give me any idea?

A. I couldn't.

Q. A large number or small number?

A. I couldn't say.

Q. Have you any recollection of the subject?

A. Not at all.

The Court: We will adjourn until tomorrow morning at 10:30.

Whereupon an adjournment was taken until tomorrow morning, Thursday, November 13, 1929, at ten-thirty o'clock.

New York, N. Y., November 13, 1929.

Met pursuant to adjournment at 10:30 A. M.
Present: Same as before.

WILLIAM P. BRAKENBURY, recalled by the respondent, resumed the stand and testified as follows:

Direct examination.

By Mr. Keating:

Q. Mr. Brakenbury, I just received this document—in fact, I received the two documents, per S. S. "Majestic". Will you look at this particular document and tell me what it is.

A. This is a voyage report for the S. S. "Galileo", for voyage commencing May 24th, 1926, and completing July 19th, 1926.

[fol. 603] Q. Completing at Hull?

A. Completing at Hull.

Q. Was that Mr. Oxterby's report?

A. It is Mr. Oxterby's report, signed by him.

Q. And this report was a similar report to those he makes at the end of every voyage at Hull?

A. Yes.

Q. And the report you hold in your hand is the report of what I call the June voyage?

A. Yes.

Q. The last day the vessel was in Hull?

A. That is correct.

Mr. Keating: I ask that it be marked in evidence.
Mr. Jones: No objection.

(Marked Respondent's Exhibit 29 in evidence.)

REBUTTAL

S. W. PARR, recalled as a witness on behalf of the libellant, testified as follows:

Direct examination.

By Mr. Jones:

Q. Professor Parr, I am going to ask you some questions with respect to the time during which the coal shows an avidity for oxygen. Will you tell us during what period of time coal shows an avidity for oxygen?

A. I don't know of any data that has been continued quantitatively, that is, with actual determination of the time that oxygen shows an avidity for coal, for one series of tests extend over 36 weeks and the other 46 weeks. I [fol. 604] have also data for six years but not in the same quantitative fashion. After 46 weeks the avidity was still active.

Q. Is there anything from the data which you took for six years which will give you any data?

A. I have no measurements at the end of six years. The measurements were in the first instance directed for 46 weeks, ten and a half months.

Q. Did you make those measurements yourself?

A. I did, yes, sir.

Q. And those show a marked avidity for oxygen at the end of 46 weeks?

A. Yes, sir.

Q. And throughout that entire period from the time you began to make your tests?

A. Yes; it was more active the first few days than in the last period.

Q. After the first several days how did it continue then?

A. Evenly for the entire time.

Q. And it showed a marked avidity throughout that time?

A. Throughout that time.

Q. Now, Professor Parr, is there a difference between what we call surface ventilation and through ventilation?

A. There is.

Q. Explain what that difference is?

A. Surface ventilation removes continuously the air in contact with the surface of the coal. Through ventilation

involves the admission of air into the mass and passing through the mass and out, taking an entirely different passageway, a different route from the other.

Q. Is surface ventilation considered desirable or undesirable?

A. It should be provided for in order to remove any possible gases that come with the coal, which may cause explosive conditions over the coal. It has nothing at all to do with oxidation conditions.

[fol. 605] Q. Is through ventilation considered desirable or undesirable?

A. It is absolutely undesirable unless it can be so complete as to carry away any heat that is generated, which is practically very difficult.

Q. Is it considered dangerous?

A. It is dangerous.

Q. Assuming that coal is placed in No. 3 tween deck so that it is piled around the forward end of the space and around the side, and lies against the sides and bulkheads in such a way that the top of the pile is about three feet from the top of the bulkhead, and the coal is inclined so that the bottom of the incline is about two feet from the square of the hatch shown on the drawing, and some coal remains in the compartment from June 30th, 1926, until August 28th, 1926, and the bulkhead which forms the forward end of the compartment is constructed of wood consisting of planks three inches in thickness and about ten inches in width, the planks are said to have been planed and fitted close together with battens nailed over the seams on both sides of the seams, the planks being fitted with slots, both at the top and bottom of the bulkhead, the slots consisting of beams of wood, as shown on the drawings prepared by the mate, and the beams resting on the deck but not fitted to the deck so as to close the openings formed by the overlap of the deck plates, are you in position to say whether or not such a space is a safe place in which to stow the coal which has been described in this question?

A. I am.

Q. What is your opinion?

Mr. Keating: If your Honor please, I object to that ques-

[fol. 606] tion on the ground that while Professor Parr is

qualified as a coal expert, this question involves knowledge of ships and a construction of ship bulkheads and a knowledge of all the features that enter into the ventilation or non-ventilation of a ship's space.

The Court: Well, you want the question overruled as to the facts?

Mr. Keating: No, I object to this witness being asked for an expert opinion that involves a ship's construction.

The Court: I overrule your objection with an exception.

By Mr. Jones:

Q. Is the place safe or unsafe?

The Court: Just with reference to spontaneous combustion. Safe or unsafe with reference to the question only of whether or not the coal might cause fire spontaneously.

The Witness: It would be unsafe.

Q. Will you state your reasons for saying it is unsafe?

A. The opportunity for air to enter the mass of coal and produce through ventilation is evident to my mind, and the piling of the coal would of necessity segregate and create voids throughout, so the through ventilation could proceed readily. This through ventilation beginning at the bottom of the pile would be in the worst possible place for such ventilation to start. There is no spontaneous combustion of the coal at the surface. That never happens. It always starts in the interior of the mass and, in my opinion, this [fol. 607] condition as shown here would be exactly in line for a dangerous situation to take place.

Q. I show you figure 6 appearing on page 6 of Exhibit 28, and I ask you if that diagram illustrates what you have just told us?

A. It does.

Q. Now, keeping in mind the description which I gave you of the bulkhead, the wooden bulkhead at the forward end of compartment No. 3, which portion of that bulkhead, with respect to its top and bottom, is most important that it should be made tight?

A. The bottom.

Q. Assume that at New York, before the fresh supply of coal, which I have described to you before, was placed in this compartment, tween deck No. 3, the chief engineer puts

his hand in up to his wrist in the mass of coal, he felt the coal with his hands and arms and wasn't able to detect any decided degree of temperature from so feeling the coal; would you be of the opinion that the compartment was still unsafe for the purpose of carrying coal?

A. I would.

Q. Give us your reasons for so saying.

A. Spontaneous combustion doesn't start at the surface, as I have already said, but down within the interior of the mass. My own explanation of fires shows it to be at least four or five feet below the surface, where the heating begins. In one of the exhibits, the one by Mr. Huff, he says it occurs from five to eight feet below the surface, where heating started. My reason would be: I don't see any adequate test which would be six, eight or ten inches below the surface, as to the danger involved.

Q. Is it possible to determine whether or not coal is heated by attempting to smell the coal, to ascertain whether [fol. 608] or not gases are being given off by the coal?

A. It is not.

Q. Give us your reason.

A. When gases are given off which have an odor to them, the temperature is much above the ignition point, it has already reached a temperature which is the burning temperature. Below that temperature, however, there is a dangerous condition, conceded by everyone to be dangerous, at the time of which there is no gas being given off, which has an odor.

Q. Can you determine whether or not there is a hot spot in coal by smelling the coal?

A. Not at all.

Q. What is marsh gas and what relation has it to oxygen?

A. Marsh gas is a gas which has been in the coal at the time of mining. It is a mining condition. The coal is impregnated with carbon and four hydrogens. That is a gas which marsh gas, which the chemists designate as one goes along with the coal—it isn't a product of oxidation—which slowly exudes from the coal. Some coals have more of it than others, and it is dangerous for the reason that in the upper part of a hold or a compartment it might make an explosive mixture with air.

Q. Has it any relation to oxidation?

A. Absolutely no relation to oxidation whatever.

Q. How much of a hot spot is required to make a pile of coal likely to become afire?

A. I would say any size spot. A spot of a cubic foot of coal, if it were heated, would be quite sufficient to endanger the whole mass.

Q. In order to obtain what we call spontaneous combustion how much of the portion of the whole pile of coal needs to be oxidized?

A. It would not need to be but a very small portion.

[fol. 609] The Court: By very small portion what do you mean?

The Witness: A cubic foot or even a hatful, if it got up to the ignition point; larger spots in proportion just as oxygen could get to it.

By Mr. Jones:

Q. Would a small amount of oxygen coming through the bottom of this bulkhead be sufficient to supply the oxygen required?

A. I don't think so. You mean the sill bottom?

Q. Between the bulkhead; you know I have described the bulkhead to you, as the beams rested on the plates and the overlaps of the beams.

Mr. Keating: I object to that. There is no testimony that the plates overlapped the beams.

The Court: I don't recall any such testimony.

Mr. Jones: I asked the mate this question—because I said from my photographs it was so—I asked the mate, and I help up my hands to demonstrate, if the plates in the deck weren't fastened together by one plate resting on another.

The Court: I remember that.

Mr. Jones: And then the beams rested over those plates where the plates came together.

Mr. Keating: No, sir; he didn't.

The Court: My recollection is that he didn't know what the situation was under there one way or the other.

Mr. Keating: He said any good carpenter would fit it that way.

[fol. 610] The Court: I will allow the question.

Mr. Jones: I think I can get from Professor Parr what I want without going that far.

By Mr. Jones:

Q. I leave out the temperature. Assuming that the bulkhead is constructed in the way that the mate has described, that is to say, that the planks running vertically, planed, put together, battens on each side and with separation cloth, separating it from the deck, which is fastened at the top, the separation cloth consisting of two or more pieces of material, which is described to be something like bagging, but a little finer than bagging, something you can see through when you held it up to the daylight, then fastened where the two pieces of material came together with battens nailed into the bulkhead; can you say whether or not a sufficient quantity of air could come through such a bulkhead, so constructed?

The Court: Leave out any possible crevices between the sill and the plates of the floor.

A. In my opinion there would be sufficient opportunity for air to get in to cause spontaneous combustion.

By Mr. Jones:

Q. And would still be of opinion that it would be a dangerous compartment in which to store coal?

A. It was.

Mr. Keating: Your Honor, I move to strike out that tes-
[fol. 611] timony, because that testimony involves an opinion with respect to a bulkhead. The question that Mr. Jones directed to this witness, which the witness answered, was whether a small quantity of air getting through the bulkhead would cause a hot spot, and the witness answered No.

The Court: The witness was asked whether air might go through the sill plates in the bottom. To that he said no.

Mr. Keating: As I understand the question, it was whether a small amount of air getting into the mass of the coal would cause a hot spot.

The Court: I deny your motion to strike it out.

By Mr. Jones:

Q. Would a small continuous current of air getting into the coal cause a hot spot?

A. It would.

Q. Professor Parr, as I understand what has been testified by the ship's people, that old coal was lying around the sides and ends of this compartment on an incline, the top of the incline being about three feet from the top of the bulkhead and the sides, and the bottom of the incline about two feet from the square of the hatch, all around; then when they came to put the new coal in, that new coal was dumped in the hatchway space and was thrown in around the space so formed by the incline of the coal and until the compartment was filled with coal, with the 160 tons of coal that was in the compartment when they first began their operation to put the new coal in, plus the coal which they [fol. 612] put in, reached about 350 tons, as I remember, would you say that was a prudent thing to load the coal that way?

A. I would say it wasn't.

Q. Would you say that was a dangerous condition?

A. I would.

Mr. Jones: That is all.

Cross-examination.

By Mr. Keating:

Mr. Jones: If your Honor please, in order to save a little time, I have three other experts here and they have all heard this hypothetical question which I have put to Mr. Parr and I do not think it will be necessary for me to later repeat it.

By Mr. Keating:

Q. Professor Parr, you have referred to page 6, figure 6, of Exhibit 28, to a coal pile which you say illustrates what you had in mind about through ventilation; is that correct?

A. Yes, sir.

Q. Now, do you claim that the coal pile on the "Galileo" looked like that?

A. I didn't. It had the corresponding conditions, however; it wasn't in that shape.

Q. Have you taken into consideration the fact that the coal was trimmed when it was put into that compartment?

A. Certainly.

Q. Professor Parr, assume that this hot spot that caused this fire was at a point about 17 or 18 feet aft of the wooden bulkhead that has been described, and that that hot spot was about 17 or 18 feet aft of the wooden bulkhead we have been talking about and described to you by Mr. Jones, and [fol. 613] along the starboard side; in your opinion, would a small, infinitesimal amount of air getting through the wooden bulkhead forward cause that hot spot?

A. That depends on what you mean an infinitesimal amount of air. Whatever air got in, if the coal was segregated and channeled, it would not make any difference whether it was five feet or fifteen feet.

Q. If somebody built a channel it would be fine?

A. Well, coal channels itself automatically, certainly.

Q. Would you say with an assorted mass of coal, which had been in that ship in that position since June 30th, that a small amount of air getting through the bulkhead could push itself 17 or 16 feet through that mass of coal to the point where the fire was discovered?

A. It would be entirely possible.

Q. Would you consider it probable?

A. I would consider the method of filling a ship. We know the lumps predominate over the fine stuff. That would be practical for the air to travel through the coal.

Q. Professor Parr, if the hot spot was at the after end of this pile, the old coal near the bottom of the slanting pile, which it would have to be from the description, the air could have gotten to that spot even through the bulkhead?

A. I don't know; I do not know the construction that you have reference to. If there were openings anywhere near that spot, the air probably would have traveled the shortest route.

Q. Now, the hatches were off while the vessel was in port, they were taking out grain,—that, apparently, at the time there was a condition existing from August 17th, when the vessel got here, until August 26th, when the coal was loaded—in other words, wasn't there an opening right

[fol. 614] up to the sunlight and air? Might the air have come from that place?

A. On the surface, yes, but not in the interior of the coal.

Q. If a coal pile is piled up in the outside—in the great outdoors, so to speak—the outside air gets in under the coal pile, doesn't it?

A. It does. It may——

Q. Now, if this coal was piled up in the bunker with air in there—the testimony shows that they opened the lower hold and put grain down in there, and that hatches were off while in port—there would be some air in the No. 3 tween deck, would there not?

A. Yes.

Q. If you find the hot spot, so to speak, not against the bulkhead but 18 or 19 feet forward, in a spot which is practically the end of the pile, so to speak, of old coal, wouldn't you naturally look for the air to have entered the pile at that spot?

A. That would depend upon conditions. Air——

Q. It is conceivable that that might have happened?

Mr. Jones: Let him answer the question.

A. Air under those conditions would be considered as not likely to cause spontaneous heating ordinarily. Now, if you can establish conditions whereby that air would circle down through the coal, it would be just as likely to cause a hot spot as any other air, but it must get down in the mass of the coal to start spontaneous combustion.

Q. Will you look at this figure, Exhibit 28, page 6, and tell me where in that figure fire would likely start.

A. Assuming that the dark portions are the finer por-
[fol. 615] tions and that the distance from this surface were four to five feet in from the surface, I would say that in this lower mass would be the point where spontaneous combustion would start.

Mr. Jones: You have drawn a line with a pencil and marked "A".

By Mr. Keating:

Q. You mean in this mass in here, inside that?

A. In the darker portion of the coal.

Q. Below the line or above the line?

A. Above the line where that pencil mark is.

Q. Suppose you put your pencil point exactly where you think the fire would start.

A. Well, in this zone here.

Mr. Keating: I will mark that "A".

Q. Now, where would the air enter that coal pile?

A. It would come in along the segregated portion of the coal, which is coarse enough to admit of the air passing through.

Mr. Keating: Shall we mark that with an arrow?

The Witness: All right.

By Mr. Keating:

Q. Might it come from the other side, too?

A. It might.

Q. Now, Professor Parr, I am going to draw a line through the center of that picture.

Mr. Jones: Give him Exhibit 28. We ought to mark the actual exhibit.

[fol. 616] Q. Is that about right?

A. It is.

Q. Now, I am going to draw a line there; I will call that line B-C, and I am going to ask you to assume that this is either an airtight bulkhead or a substantially air-tight bulkhead, and that this slanting line B-D is the form of the coal pile, the finds and the larger pieces and the largest pieces being in the form shown in that photograph on page 6, Exhibit 28, and I ask you to tell me in that situation where the air would come from which would start any fire in that coal pile.

A. You are asking me to assume that this perpendicular is air-tight. No air can circulate through it. If fire starts in that mass it would have to come from the segregated portion of the pile and run through the fine material above.

Mr. Keating: We will mark that, the direction of the air, with the arrow which is E.

Q. Is that correct, Professor Parr?

A. Yes.

The Court: Is that a fair representation of the old coal in No. 3 tween deck or not?

Mr. Keating: I am not saying that.

The Court: How is it relevant?

Mr. Keating: It is relevant in this way: a pile in that particular shape, the Professor has assumed that because some air could get through this point where I have marked C, that that therefore was the place where it came from later. The coal in question was piled in that general form.

The Court: The coal pile in the form in the bunker was made this way and trimmed off in here.

[fol. 617] Mr. Keating: But we are only talking about the old coal.

The Court: I am talking about the old coal too. The old coal was put in by piling it in the center of the hatch and it came down. This apex ought to be over here, if that is the bulkhead, and then fall off in this direction.

Mr. Keating: That is quite an error.

The Court: Correct me.

(Extended discussion off the record.)

The Witness: I would like to protect my own answer in which the condition of accessibility of air to the bunker only was mentioned. I would not agree that this is a possible arrangement of the coal. I would pass on that but I would like to make it evident that I am not admitting that form of piling of the coal.

Redirect examination.

By Mr. Jones:

Q. Professor Pare, I show you Exhibit 14 and a drawing which appears on the last page of that exhibit, showing deck distorted in this area, and I direct your attention — what is described as a wood bulkhead on that exhibit and call your attention to the fact that that wood bulkhead is a wood bulkhead in the forward part of No. 3 tween deck, and No. 3 tween deck is marked No. 3 hatch, and I also direct your attention to a portion of the exhibit which reads as follows:

"It was evidence that the fire had been in the lower tween deck and quite local in extent inasmuch as the distorted

parts are confined to the limited area described above and [fol. 618] indicated on the enclosed sketches. The hottest part of the fire has been from the after end of No. 2 hatch to the wooden bulkhead between No. 2 and No. 3 hatches in a fore-and-aft direction and from about five feet to starboard of the center line to about twenty feet to port of the center line in a thwartship direction."

And this is the area indicated in the sketch, and I ask you whether or not with that before you you are in a position to say that fire started within the area as shown on that sketch.

The Court: Before you answer, I would like to have Mr. Keating hear the question.

(Question read by the reporter.)

Mr. Keating: I object to that.
The Court: I will sustain the objection with an exception.

By Mr. Jones:

Q. You were asked a number of questions by Mr. Keating with respect to figure 6, which appears on page 6 of Exhibit 28, and I believe you stated in reply to some question that had been put to you that that wasn't your conception of the pile of coal in the No. 3 tween deck in the "Galileo". Am I correct in so saying?

A. I should say it isn't a possible method of arranging itself in the matter of fine and coarse material.

Q. Will you explain what other possible methods there are of arranging fine and coarse material?

A. It would be more a reverse of this condition, if one [fol. 619] can conceive of it as being turned over on its side and the coarser portion between the incline of the bulkhead and the deck. As you get farther away from the bulkhead the fine material would begin to grow in amount relatively.

Q. In your opinion, would it be dangerous to have coal stowed in a compartment with an air-tight bulkhead as Mr. Keating has described to you?

A. If it were air-tight it would be safe from spontaneous combustion.

Q. Even with the hatches open?

A. Even with the hatches open.

By the Court:

Q. I understood you to say that surface ventilation is not employed at all for the purpose of preventing spontaneous combustion.

A. My understanding is it is not.

Q. In this absorption of oxygen, does the coal pass on the oxygen after it is absorbed? I want to know how the oxygen goes through the coal. A particle of coal exposed to oxygen will absorb some of it. Now, having absorbed it does it continue to hold it or pass it on to the particle of coal adjacent to it?

A. It will pass it on.

Q. The identical molecule of oxygen that it has absorbed?

A. Not necessarily. The oxygen that the coal takes on it holds for a time—that is, I am giving you the best opinion, the authority, and that is my own; the oxygen is first held by absorption only and not by chemical union. As it goes on it enters into chemical combination with the coal, and the products of that oxidation pass off through the coal. Now, the oxygen, when it is taken up by the coal, is localized. That particular particle of oxygen stays where [fol. 620] it is taken up, but more can come in and more can be taken on, almost indefinitely.

Q. Then oxygen reaching the interior of a coal pile reaches it only by convexion?

A. By convexion only.

Q. Now, in the case of this compartment, wouldn't the coal near a crevice absorb such oxygen as came in contact with it and bar the way to the interior coal, the coal further in the interior of the pile, getting oxygen from the same crevice?

A. I would hardly think it absorbs with sufficient rapidity to rob the air of oxygen as it passes through. That would depend on the amount of the air. If it stayed in contact with the coal long enough there might not be any oxygen left for further in, but that would be an almost impossible situation.

Q. Now, the avidity that you mentioned has very little effect on creating convexion, doesn't it, in creating a current of air?

A. I would say it would be very small in creating a current.

Q. Practically negligible?

A. If the action of avidity is just in proportion as it has taken oxygen out of the air, it is in that proportion a vacuum and calls for more air.

Q. But in the case of this compartment, that avidity, whether it is considered in the first stage of merely absorbing, or the latter stage of chemical reaction, would have very little effect in drawing air through the crevices?

A. It would be very small.

Q. So that the amount of air that would go through those crevices would depend much more upon the variations in pressure between the atmosphere in No. 3 and in No. 2, wouldn't it?

A. I think so. I would agree to that.

[fol. 621] Q. And with the use of the ventilators the pressure would be practically the same, wouldn't it?

A. Well, I assume that ventilation operating in compartment 3 would tend to reduce the pressure in the compartment as against that side of the bulkhead on the forward part, on the forward side. The compartment forward of the bulkhead would have the normal pressure of air; if the ventilators had any pull at all, the flow would be there forward into No. 3, wherever there was——

Q. Well, the ventilators in No. 3 are there for the purpose of relieving the pressure in No. 3, to take off this marsh gas?

A. They would have to reduce pressure as well in order to get fresh air to move in place of the air drawn off.

Q. If there were ventilators in No. 2 and 3, the pressure would be practically the same?

A. I think so. It would be very difficult to conceive of a set of conditions where there was an exact equilibrium of pressure of air.

Q. In so far as you know, the pressure in No. 3 might have been greater than in No. 2?

A. Yes.

Q. In which case the air from the crevices would tend to pass in the opposite direction?

A. In the opposite direction, yes.

Q. So that, practically speaking, the only force tending to draw air through those crevices would be a variation in pressure between the two compartments?

A. That would be the main factor involved. I think the factor of absorption and the tendency to create a vacuum should not be lost sight of, however.

Q. That is probably more than offset by the tendency to liberate marsh gas?

A. Not at all. The marsh gas isn't a factor sufficient in amount to enter into the matter of pressure.

[fol. 622] Q. Can you give me any figures on the comparative amount of marsh gas liberated and of oxygen absorbed by coal in volume?

A. Coal will absorb approximately from one and a half to two times its volume, that is to say, a cubic foot of coal in contact with air will absorb oxygen from about two cubic feet of air. That would be altogether without any conceivable relation with marsh gas.

Q. Taking it from the time the coal is first mined.

A. I would say within ten days that this avidity is most active. If I were to assume the amount of air necessary to bring the coal up to a dangerous temperature it would take two cubic feet of air to one cubic foot of air.

Q. What percentage of oxygen is there in the air?

A. Twenty per cent.

Q. So it wouldn't be really two cubic feet. It would be absorbing about two-fifths?

A. Two-fifths.

Q. Of its own volume of oxygen, covering that period when the avidity is so very great, the first ten days, and therefore it would be very much less, depending upon how long the coal had been mined. Say it had been mined six months, it might for a period of a few weeks absorb very little, might it not?

A. The relation would be about one month, would absorb about one day in the active part of the stage. In general, that is to be the ratio. Now, marsh gas: I would think that where we would be speaking of cubic feet of air, the marsh gas would not be any more than in cubic inches. If we talk about two cubic feet of air I think two cubic inches of marsh gas would be more nearly the ratio of the marsh gas, so I don't see how the marsh gas would cut any figure in the ventilation or displacement of gasses.

[fol. 623] By Mr. Jones:

Q. What period of time does coal give off marsh gas?

A. I couldn't imagine it would be giving off marsh gas more than two or three days.

Q. After what time? When it comes out of the mine or what time?

A. I was speaking in terms of after the coal is received, but it would be quite applicable to the time from mining, but coals vary in quantity of marsh gas which they hold.

Q. But you said you couldn't conceive of coal giving off marsh gas after two or three days, after it is received.

The Court: It is only this marsh gas that this surface ventilation is for?

The Witness: That is right.

By Mr. Jones:

Q. And as I understand your testimony, your position is the accessibility of air is a more important point rather than that current of air?

A. It is.

Recross-examination.

By Mr. Keating:

Q. Professor Parr, if coal doesn't give off any gas, dangerous gases, after the first few days——

A. Marsh gas.

Q. —marsh gas, why do you have to have surface ventilation? Are there other gases?

A. In the coal?

Q. Yes.

A. No.

Q. What is the purpose of having surface ventilation if the coal doesn't give off any gases after two or three days [fol. 624] after it is mined?

A. I think it would be to guard against danger.

Q. You are not in favor of surface ventilation?

A. Surface ventilation? Yes, against explosion.

Q. What explosions could there be if there are no gases?

A. None.

Q. What are you guarding against?

A. Against the possibility of gas being exuded in the space of time.

Q. Now, Professor Parr, you have told me that the purpose of surface ventilation was to get rid of gases that the coal exuded. Am I right?

A. Correct.

Q. And you said there must be surface ventilation of coal to get rid of those gases and that was the only purpose of surface ventilation: am I right?

A. Well, I assume that that is the main purpose. Whether that is the only purpose I don't know.

Q. Didn't you tell his Honor that the only purpose of surface ventilation was to get rid of the dangerous gases?

A. Very well.

Q. Didn't you say that?

A. I am not sure of whether he stipulated that that was the only reason. It is the main reason and you can qualify that point.

Q. Professor Parr, didn't you tell his Honor not later than this morning that the only purpose of surface ventilation was to get rid of dangerous gases, and that dangerous gases had nothing to do with spontaneous combustion?

A. I——

Q. Did you or did you not so testify this morning?

A. I would have to have that read.

Q. You can't recall?

A. I am not sure unless I hear my answer to it. No, sir. I should say it is the only reason for surface ventilation. [fol. 625] Suppose you must send a man into that place. Would the ventilation for marsh gas suit the need and conditions of the man working there? I would say it is absurd.

Q. Professor Parr, do I understand that you have testified that after the first few days there are no dangerous gases to be taken care of by surface ventilation?

A. I didn't say that there are not some gases, no explosive gases to be taken care of by surface ventilation.

Q. I ask you the flat question, Mr. Parr: if coal gets rid of all those dangerous gases during the first few days——

A. Carbon dioxide is a dangerous gas.

Q. That is marsh gas?

A. No, carbon dioxide is the product of combustion. Marsh gas isn't the product of combustion.

By the Court:

Q. Well, does coal liberate carbon dioxide from the start?

A. Oh, no; over 46 weeks.

Q. In what quantities does it liberate carbon dioxide?

A. It liberates carbon dioxide, as I recall the figures, to the extent of about 7 per cent of the weight of the coal, in the course of that number of weeks.

Q. Well, that would be more than the volume of oxygen absorbed, wouldn't it?

A. It is directly the result of oxygen absorbed. The oxygen absorbed may be sufficient in amount to increase the weight of the coal to that extent and the carbon dioxide, that is a product of that oxidation, rises to the surface.

Q. So that the atmospheric pressure in that chamber or the pressure in the closed, sealed chamber, would be main-
[fol. 626] tained about equal, though there was absorption of oxygen, would it?

A. Well, that would be the tendency, to equalize the robbing of the atmospheric oxygen.

Q. In those sealed jars that you mentioned, do you find that there is a partial vacuum after the absorption has continued for a day?

A. To the extent of the removal of the oxygen.

Q. A partial vacuum?

A. Yes.

Q. How about the carbon dioxide that has been liberated?

A. The production of carbon dioxide in that stage of activity is not very great. It comes in as an action later on.

Q. So that if you were testing out the pressure in your containers on about the thirtieth day you let in a fresh supply of air and permit the absorption of oxygen to go on for 24 hours and then test for your pressure; at the end of 24 hours you would find it was about atmospheric pressure, wouldn't you?

A. It would be more nearly atmospheric pressure than during the great avidity.

Q. Because the carbon dioxide would have been liberated in about the same amount that the oxygen was absorbed?

A. Yes.

Q. And that, of course, applied to coal in No. 3?

A. I think it would.

By Mr. Jones:

Q. When coal gets warm, even to a degree or so, can you state whether or not a current of air is formed that would create a chimney effect from the crevices in the bulkhead through the mass of coal?

Mr. Keating: I object to that as a leading question.

[fol. 627] Mr. Jones: I will modify it.

Mr. Keating: You have already told the witness.

By Mr. Jones:

Q. Professor Parr, when coal is heated even to a degree or so, what effect has that, if any, on the effect of air through the coal?

A. It distributes the equilibrium and the warmer gases rise and the cooler gases take their place.

Q. What is the relation between the weight of marsh gas and the weight of air?

Mr. Keating: I object to that as not proper re-direct examination.

The Court: It has nothing whatever to do with the pressure.

Mr. Jones: Marsh gas rises, if your Honor please.

The Court: I think everybody knows that. However, put it on the record if you desire.

(Pending question read by the reporter.)

A. About one-fourth.

Q. Which is the heavier?

A. The air.

Horace C. Porter, recalled as a witness on behalf of the libellant, testified as follows:

Direct examination.

By Mr. Jones:

Q. Professor Porter, have you made experiments to determine over what period of time coal shows an avidity for oxygen?

A. Yes, I have.

[fol. 628] Q. Will you tell us what the results of your experiments are?

Mr. Keating: I object to it as not proper rebuttal. The matter has been thoroughly gone into on Mr. Jones's direct case.

Mr. Jones: I bring out this testimony in view of what your Honor said during the trial. I thought your Honor had agreed——

The Court: Will he corroborate Professor Parr?

Mr. Jones: Yes.

The Court: I do not think that there is any question but that the avidity is very great for the first six or seven days.

Mr. Jones: It continues over a period of 46 weeks at an even rate.

A. My experiments showed that the avidity of coal during the first two or three days for oxygen was greater than during the succeeding period, but the absorption of oxygen continued then for a very long period without any great decrease. After ten months, in my experiments, it was still absorbed very rapidly, not as rapidly as the first days, however.

Q. Do you mean decrease in rate?

A. Not a great decrease—a slight decrease.

By the Court:

Q. Do you agree with Dr. Parr that that is about one-thirtieth?

A. No, your Honor, I don't agree to as great a difference as that. There would be some difference, but not quite as great as one-thirtieth.

[fol. 629] By Mr. Jones:

Q. Now, you heard the hypothetical question which I put to Professor Parr with respect to this compartment and the piling of the coal around the compartment and the construction of the bulkhead, described in that question: Are you in a position, with the facts so stated, to say whether or not in your opinion the compartment was a safe compartment for the storage of coal?

A. Yes, I am in a position.

Q. State whether or not it is a safe compartment for the storage of coal.

Mr. Keating: I object to it as not competent; not proper rebuttal.

The Court: Overruled with an exception.

A. I still believe it wasn't a safe compartment for the storage of coal.

By Mr. Jones:

Q. Please state your reasons for so saying.

Mr. Keating: I object. I am entitled to know his reasons, not Mr. Jones. He cannot cross examine this witness.

Mr. Jones: I am clearly entitled to ask the witness to state——

The Court: I will take it and give you an exception.

Mr. Keating: He is not entitled to give the details and processes upon which he forms his opinion.

The Court: I will take it anyway and give you an exception.

[fol. 630] A. My understanding of your sketches as they were drawn, during Professor Parr's testimony, the loading of this compartment with coal would cause the lumps and coarser parts of the coal to collect at the base of the pile, near the bulkhead.

The Court: He has told me all that. I know what he said. Do not let us repeat it.

Mr. Keating: I move to strike it out.

Mr. Jones: If your Honor please, of course Mr. Porter has testified to this, but we have had, since the direct case, a great deal of additional evidence as to the structure of this bulkhead and all I want to do——

The Court: But he is coming down to fundamentals again. I will permit you to direct his attention to the specific things, such as battens, and so forth, that weren't in evidence at the time, but we don't want to go all over what he said before.

By Mr. Jones:

Q. Professor Porter, I direct your attention to the fact that this mate has testified that this bulkhead was con-

structed of planks three inches in thickness, ten inches in width; the edges of the planks were planed, and that they were fitted vertically in slots, slots being formed of pieces of wood, as shown on Exhibit 21, and I ask you, keeping in mind the bulkhead so constructed, whether you still think you are in a position to say that compartment, after the bulkhead, was a safe compartment to stow coal; also keeping in mind that they had a separation cover which was [fol. 631] over the battens, over the bulkhead, which is fastened to the bulkhead by a batten which ran along the top of the separation cover, being about the size of an ordinary hatch cover,—two were necessary to cover the entire bulkhead,—and a batten was nailed to hold the two pieces of separation cover together on to the bulkhead.

Mr. Keating: Now, if your Honor please, I object to that question. This man is a chemical engineer. He is asked to give his opinion with regard to a portion of ship construction which involves knowledge of ship ventilation, hold pressures, and a number of features that this man cannot possibly know anything about. I can get a man over in City Hall Park who knows more about this thing than this man.

The Court: Just having in mind the matter of spontaneous combustion.

A. I would answer that by saying I have had experience in the examination of coal piles and have had charge of entire coal piles, and I believe that would qualify me to answer the question.

Mr. Keating: I move to strike out that answer.

The Court: Strike out the answer.

A. The ventilation, I believe, in this case through the under part of the coal, under the bulkhead and through crevices would be sufficient to cause heat.

[fol. 632] Mr. Keating: I move to strike out the answer. There is no evidence that there were holes or crevices in the bottom of the bulkhead, nor was the witness asked to assume——

The Court: You weren't asked to assume there were any holes or crevices in the bulkhead. Leaving that out and

considering solely the crevices between the planks and the battens——

The Witness: It doesn't make any difference whether they were under the bulkhead or between the planks, as long as the air came through.

By Mr. Jones:

Q. What I am asking you is: are you in a position on the facts which I stated to you to state whether or not the compartment was a safe compartment for the stowage of coal?

A. In my opinion——

Q. Yes or no.

A. Yes.

Q. Then state your opinion.

Mr. Keating: I object.

The Court: I overrule your objection and give you an exception.

A. In my opinion it wasn't a safe place.

By Mr. Jones:

Q. Assume that at New York before the fresh supply of coal was placed in this compartment, the chief engineer put his hand in up to his wrist and felt the coal with his hand [fol. 633] and was unable to detect any decided degree of temperature from so feeling: would you be of opinion that the compartment was still unsafe for the purpose of carrying coal?

A. Yes, I would.

Q. Is it possible to determine the condition of the interior of a pile of coal with respect to temperature, by shoving your hands into the mass of coal up to your wrist, assuming that the coal is about six feet high and tapers off on an incline of about fourteen feet?——

A. Not any further down than a man's hand up to his wrist?

Q. Is it possible to determine whether or not coal is heating by endeavoring to smell the coal, to ascertain whether or not gases are being given off by the coal?

A. Not in all cases. It is possible to determine whether the coal is reaching the degree of heat where it will give off gas, that is all.

Q. Can you determine whether or not there is a hot spot in coal by smelling the coal?

A. No.

Q. How large a hot spot is required to——

Mr. Keating: I object to this testimony as not proper rebuttal.

The Court: Overruled.

A. A spot as large as one cubic foot would give rise to spontaneous combustion which would go on to a dangerous condition.

By Mr. Jones:

Q. In order to obtain what we call spontaneous combustion, how large a portion of the whole pile of coal needs to be oxidized?

A. One small spot as large as one cubic foot or even less.

[fol. 634] Q. When coal is piled in the way in which I have described to you—this old coal being piled in this No. 3 compartment—can you say whether or not there is any movement of air through the mass of coal?

A. Yes, I can.

Q. Well, was there any movement of air through the mass of the coal?

A. Yes, there is.

Q. Please describe to us what movement there is.

A. The coal becomes slightly warm and warms the air around it and that warm air rises. It is a well known principle in all ventilation engineering that warm air rises, that a warm spot in the coal causes a current of warm air to rise from it even though it is a degree or two above the surrounding air. That is what is known as a chimney effect. Other air is naturally drawn into that warm spot to take its place. It doesn't make any difference whether it comes from one side or the other. It will come along the line of least resistance; wherever it can get the air easiest it will draw it in. Naturally, there would be more or less of a seepage or penetration of air wherever there is a warm spot, even slightly warm.

Q. In your opinion is it dangerous to admit air through the square of a hatch, in the upper portion of a coal bunker?

Is there any danger in admitting air to the coal through the square of the hatch?

A. Not very much, no.

Q. Would you consider admitting air in that way unsafe?

A. No.

Mr. Keating: No cross examination.

(Witness excused.)

[fol. 680] ALBERT E. JORDAN, called as a witness on behalf of the libellant, having been first duly sworn, testified as follows:

Direct examination.

By Mr. Jones:

Q. Mr. Jordan, you are a marine engineer?

A. Yes, sir.

Q. Will you give us a brief account of your experience?

A. I served an apprenticeship of five years. I was at sea for eight years, of which five years I was chief engineer, two years assistant manager in a dry dock in the north of England. I was fourteen years surveyor for the Salvage Association of London, 12 years of which was in America; that brought me up to 1939. From then to the present time I have been in business for myself as a consulting engineer.

Q. You represent a number of large steamship companies as engineer?

A. I represent probably 200 steamers. I am also vice-president of a steamship company.

Q. Mr. Jordan, you were one of the surveyors who signed Exhibit 14, were you not?

A. Yes, sir.

Q. Now, Mr. Jordan, from your examination of the "Galilee" on August 12th, 1937, are you in a position to say whether or not the fire which occurred on this vessel could possibly have originated as far back as 92 feet aft of the wooden bulkhead in tween deck No. 3?

A. Yes, sir.

Q. In your opinion could the fire have originated as far back as 14 feet aft the bulkhead in tween deck No. 3?

A. No, sir; I don't think so.

Q. Describe in detail what you found and the reasons for your statement.

[fol. 636] A. The fire in this space was in the immediate vicinity of the bulkhead, and there was greater damage on the deck above the lower tween deck space towards No. 2 hatch than there was towards No. 3 hatch.

Q. Have you indicated on a drawing the position where you found the damage?

A. Yes, sir.

Q. And that is described how?

A. By an oval line with dotted lines on both sides of the wooden bulkhead.

Q. With the wording "Deck distorted in this area"?

A. It was written on that "Deck distorted in this area".

The Court: Had there been any combustion on the shelter deck level?

The Witness: No, the fire was below the shelter deck and the damage was to the shelter deck.

The Court: Was there any combustion at all on the shelter deck level itself?

The Witness: No, sir; no signs of combustion on the shelter deck that could be seen at that time, which was a year after the accident, approximately a year after the accident.

By Mr. Jones:

Q. In your opinion would it have been possible for any fire to have started in the coal 14 feet abaft the bulkhead and not shown some evidence of that fire in the ship's structure?

A. No, sir; I don't think so.

Q. Can you say whether or not a wooden bulkhead can be made air-tight, Mr. Jordan?

A. Yes, sir.

Q. Can it be made air-tight?

A. Yes, sir.

[fol. 637] Q. If you say that a wooden bulkhead can be made air-tight, will you describe in detail how such a wooden bulkhead can be made air-tight?

A. The question of whether it can be is a question of fitting it. If the sills and the foundation of the bulkhead are

carefully fitted to the bunker deck platings and bedded down and properly bolted, that part can be made tight—water-tight or air-tight. The same kind of construction carried out on the sides with the frames of the ship and on the tops of the boilers of the ship, all being made of wood, the planks, whether placed vertically or horizontally,—makes no difference as to the tightness,—should have a joining between the ground and the planks themselves. The planks can then be covered with either tar paper or heavy building paper, and the seams have battens nailed over the paper, or a double buklhead can be made.

Q. Did you find any evidence in examining this ship of any bolts being used in fastening these sills over to the sides or deck of the ship?

A. No, sir. I might say I didn't particularly look for them.

Q. Now, the photograph here would show. Indicate to us on the photograph the position where the bolts would be if bolts were used.

A. The bolts would be here (indicating), but there is a great deal of debris on the deck.

The Court: Are you in a position to say whether or not there were bolts?

The Witness: I am not.

By Mr. Jones:

Q. Are there any evidences of bolts on the side of the ship here?

[fol. 638] Mr. Keating: I object to that.

Mr. Jones: The photograph speaks for itself.

By Mr. Jones:

Q. Is the cost of building such a bulkhead as you described as air-tight large or small? Is it an expensive proposition or can it be done at——

A. It would cost more than a non-air-tight, but the cost would not be very great.

By the Court:

Q. Have you ever seen such a bulkhead?

A. Yes, sir. They have built bulkheads double planked,

and I know a number of cases where they put paper on them.

Q. Is it rare or common?

A. It is common to put paper on them. In my experience I have never seen them very careful about the sills—it is an unusual thing to build in 'tween decks. There are a number of ships with bulkheads in the lower holds and the conditions are entirely different there. There is a wooden ceiling in each lower hold and the sills are fastened to the ceiling.

By Mr. Jones:

Q. Is it common practice to have a permanent bulkhead or a bunker space constructed of wood?

A. Is it a common practice?

Q. Yes.

A. It is a common practice.

Q. To have permanent wooden bulkheads?

A. It is a common practice to put wooden bulkheads in lower holds. It isn't a common practice to put wooden [fol. 639] bulkheads in hold 'tween decks, and it isn't a practice at all to fit bunkers up with wooden bulkheads.

By the Court:

Q. Never done?

A. Not with permanent bunkers.

Q. How about the temporary bunker?

A. They are made with a temporary wood bulkhead.

Q. It is quite common to have temporary bunkers in a vessel?

A. Yes, sir.

Q. And in those cases they are invariably made with wooden bulkheads?

A. Yes, sir.

By Mr. Jones:

Q. Can you say whether or not a steel bulkhead or side wall of an ordinary bunker is air-tight or reasonably air-tight?

A. The outer wall of a bunker is air-tight. In all such bunkers the ends are usually water-tight. They form as a rule a part of the structure of the ship. Sometimes they

don't. The inner wall of a side bunker is not made water-tight.

Q. Can you say whether or not it is reasonably air-tight?

A. It is reasonably air-tight in its construction. There is always a door, which is not an air-tight door.

Q. It has been suggested that air can get into the body of coal which is in a bunker through the small opening varying from one-sixteenth to one-eighth of an inch around the deck beams. In your opinion would it be possible for air to get into the body of coal through such opening?

A. No, sir. The area around the deck beam is around the [fol. 640] top. The air gets over the top of the coal, then travels along the hatch and gets into the coal which may be in the square of the hatches, but the air enters under the deck over the coal in that space.

By the Court:

Q. If the number of alleged openings were filled it could get into the body of the coal very easily?

A. No, sir. Can I show you?

Q. That is assuming that the hatch is open.

A. Supposing "A" is the ship's side, the vertical line, the beams go across ship marked "B", this lower beam is usually stupped and the boilers are here. This vertical line "C" is the side of the bunker. Now, these beams going across the ship are made coal tight so the coal doesn't fall out, by putting collars around them. On top of those beams are deck plates. The hatch is about the center of this space—the hatch is an opening in those deck plates.

Q. Indicate the hatchway.

A. Marked hatch. The air getting in here gets under this deck. Assuming this place is full of coal, the air can get in that way and into the body of the coal. It doesn't get into the body of the coal here close to it.

Mr. Jones: I offer the sketch in evidence.

(Marked Libellant's Exhibit 30 in evidence.)

Q. In your opinion, Mr. Jordan, the amount of air coming into the coal through the opening, which you have indicated along the beam, caused no damage to the coal in the bunkers?

[fol. 641] Mr. Keating: I object to that. This man has not been qualified to measure it.

Mr. Jones: He is a ship construction man and he knows ship construction.

The Court: I will take it and give you an exception.

A. The collars formed around your beams are——

Mr. Keating: I object to it as not responsive.

The Witness: I don't think so, sir. I mean, if I may qualify that. I have been at sea for quite a long time with that construction of a side bunker and there has not been any damages seen in those bunkers.

By the Court:

Q. Is it because that amount of air couldn't cause any damage or that the air wasn't located in the place to cause danger?

A. I would say the latter is correct, your Honor.

Q. You think that amount of air would be dangerous?

A. That depends entirely on how large an opening you have.

Q. I mean one-sixteenth of an inch around the beams.

A. You have quite a number of them, two feet apart. That amount of air would be quite sufficient to be dangerous.

Q. Assuming that the upper and lower bunkers are both filled, why couldn't that air get into the interior of the coal as easily as if there were no floor to the upper bunker?

A. The side bunkers of the ship are as a rule worked out [fol. 642] first. They remain closed and there is not any current of air going through them at all. They are much smaller than the hold of the ship and they are at the side of the bulkhead.

Q. It would be very hot there, wouldn't it?

A. It is very hot. They have two small hatches there, as a rule, in them, and the boilers occupy the sides in the lower 'tween decks in most of the ships, and as I made on that sheet, that deck doesn't come through. It is either open altogether—it doesn't take very long for that coal to be used up—or it is closed altogether and there wouldn't be a current of air drawn through if it was closed altogether.

Q. Now, Mr. Jordan, you heard the hypothetical question that I put, describing the bulkhead. Are you in a position to say whether the space abaft that bulkhead was safe to carry coal?

A. Yes, sir.

Q. In your opinion it was?

A. Yes, sir.

Q. In your opinion it was safe?

A. No.

Q. Are you familiar with the arrangement of ventilators on ships?

A. Yes, sir.

The Court: What is the use of taking time with that, in view of Professor Parr's statement that it had nothing whatever to do with spontaneous combustion?

Mr. Jones: I simply want to show from Professor Jordan a fact that is apparent, that the recommendation of the Board of Trade wasn't applied——

The Court: According to this witness, it had nothing to do with it. Why not relieve the case of the issue entirely and accept Professor Parr's statement?

Mr. Jones: I would like to have this point covered, if [fol. 643] your Honor doesn't mind.

Mr. Keating: I object to this testimony.

The Court: I will give you an exception.

By Mr. Jones:

Q. (Last question read by the reporter.) Can you answer? How are compartments customarily ventilated?

Mr. Keating: I object, your Honor, further that the Board of Trade rules are in evidence, introduced by Mr. Jones and, by the very terms of them, they didn't apply retroactively. I ask the Court to look at them and satisfy himself and if this witness testified that we didn't meet a regulation of the British Government that doesn't apply to us, it is a further objection.

A. The usual ventilation of the hold of a ship, which includes the 'tween decks and shelter deck spaces, is to have ventilators at the forward and after ends.

By Mr. Jones:

Q. Now, assuming, Mr. Jordan, that the ventilation in 'tween deck space No. 3 was such as shown on Exhibit No.

11, where the word "ventilation" is written on that exhibit, can you tell us what effect that ventilation would have on the compartment with respect to holding air out of the compartment?

A. The placing of this wooden bulkhead between the ventilators on the forward end of No. 2 and the ventilators at [fol. 644] the after end of No. 2 have nullified the effect of having ventilators at the both ends of your space.

Q. How are the ventilators fixed with respect to the deck beams?

A. The ventilators come in between the deck beams, passed through the deck between the deck beams.

Q. With the ventilators fixed as indicated in that sketch, what current of air, if any, would be set up in that compartment?

Mr. Keating: I object.

The Court: Overruled, with an exception.

By Mr. Jones:

Q. (Question repeated by reporter.)

A. Those ventilators would take the surface air out of the hold.

Q. Have any other effect?

A. If those ventilators were placed on the wind they would blow air into the hold if the ship were moving.

Q. What is the purpose of having ventilators in the forward and after end of the hold?

A. So that you can trim your ventilators on the wind, backwards, and get a free flow of ventilation through the entire length of your hold between ventilators.

Q. With the ventilators situated such as these ventilators were, would you get a free flow of air throughout the hold?

A. No, sir.

Q. Now, I call your attention to Exhibit 17, paragraph 5, and I ask you whether or not you would interpret that paragraph——

Mr. Keating: I object.

The Court: Of course, it is incompetent.

[fol. 645] Mr. Jones: My friend asked Mr. Brakenbury how he interpreted——

Mr. Keating: But you didn't object, Mr. Jones, and that is why it went in.

Mr. Jones: I think I did object and it was overruled.

The Court: I don't see how I would permit that. I have done many foolish things, I don't want to deny I didn't do that, but I think it was foolish if I did it.

Mr. Keating: The question is absolutely incompetent.

By Mr. Jones:

Q. What does the word "end," used in connection with a ship, mean in marine parlance?

Mr. Keating: I object.

The Court: It is undisputed. Brakenbury and the rest testified "end" meant forward of the aft part.

Mr. Jones: If that is conceded I don't need to ask——

The Court: You say that it is quite common to have temporary bunkers and almost invariably where you have them you have at least one of the bulkheads wooden. Now, you have said that there have been air-tight wooden bulkheads: are they common or uncommon?

With an exception to both sides.

The Witness: I would say it is uncommon.

By the Court:

Q. To have air-tight bulkheads?

[fol. 646] A. That is to say, that is to be so careful to be air-tight. There are a great number of bulkheads made, by pasting or otherwise covering them with paper; that excludes the air from every place, except the careful fitting of the sill over the plating, where the deck plates are leaded. I think it is usual to endeavor to make the main part of the bulkhead air-tight.

Q. Is it uncommon to see bulkheads in temporary bunkers made the way those were made, with battens over the crevices?

A. No, sir; it isn't uncommon but as a rule there is paper put on them.

Q. Is that paper put over or under the battens?

A. It is put both ways.

Q. Thin paper?

A. If it is pasted, and I have seen thin paper pasted over them; the better way is to put a building paper and

nail the battens over the paper, and nail them where the space of the joinings of the planks come.

Q. This paper: is that used to keep the dust out or keep the air out?

A. I think the thought of the people using it is rather to keep the dust away from damaging cargo than it is with the thought of making it absolutely air-tight.

Q. Of course, this separation cloth had no effect whatever in keeping air out?

A. The separation cloth is exactly the same, simply to protect the cargo.

(Witness excused.)

[fol. 647] JOHN L. STANLEY, recalled as a witness on behalf of the libellant, in rebuttal, further testified as follows:

Direct examination.

By Mr. Jones:

Q. Mr. Stanley, can you say whether a wooden bulkhead can be made air-tight?

A. It can be made air-tight.

Q. If you say it can be made air-tight, will you tell us how much can be made air-tight?

A. One way of making the best kind of air-tight bulkhead would be with a double thickness of planking, staggering the seams and a layer of paper or even canvas in between—close canvas—and fasten*ed* them together in a——

Q. Is the bulkhead so constructed costly or reasonably inexpensive?

A. Well, it is less expensive than a bulkhead and it is more expensive than a bulkhead such as has been described on the "Galileo".

Q. Well, would you say it would cost a lot of money, a thousand dollars, five hundred dollars? Can you give us any idea?

A. The difference wouldn't be, in a ship such as the "Galileo", wouldn't be, to speak roughly, $300.

Q. Is it a common practice to have a permanent wooden bulkhead in a bunker space?

A. No.

Q. Can you say whether or not a steel bulkhead or side wall on an ordinary bunker is air-tight or reasonably air-tight?

Mr. Keating: I object to the words "reasonably air-tight", and I object to Mr. Jones asking the witness to give evidence on a subject not definite. That is a matter I think I am entitled to know.

[fol. 648] Q. Air-tight.

A. It would say within a comparatively short space of time, after the bulkhead had been worked it would be air-tight, from the rusting through damp coal put in there, at the seams, where the lapping of the plates were.

Q. It has been suggested that the air can get into the body of the coal through the small opening varying from one-sixteenth to one-eighth of an inch around the deck beams. In your opinion would it be possible for air to get to the coal through such openings?

A. That depends on the kind of coal, and so forth. Undoubtedly each of those compartments or decks are provided with the necessary ventilators for taking off accumulations of gases. If they are properly constructed they would take care of a considerable amount of it. In addition to which, if the coal was being used in the lower bunker it would make an opening through those hatches that would allow any other air to go through. However, if it was leaking through that coal and the coal was of sufficient proportions to allow a current of air to permeate through that coal, if there were channels or lumps, such might be possible, but undoubtedly to a very small extent.

Q. Now, you have heard the hypothetical question which I put to the other witnesses who just preceded you. With the question before you, are you in a position to say whether the compartment on tween decks was safe or unsafe for stowage of coal?

A. In my opinion it was not safe.

Mr. Keating: No cross-examination.

(Witness excused.)

[fol. 649] FLETCHER STARR, recalled as a witness on behalf of the respondent, testified as follows:

Direct examination.

By Mr. Keating:

Mr. Keating: I wish to recall Mr. Starr, your Honor.

Mr. Jones: My friend objected to my recalling witnesses on rebuttal. Quite clearly I have a right to object to surrebuttal, although I have no objection to Mr. Starr going on the stand.

The Court: It depends upon what he is called upon to testify to. It is possible it is proper. What is the relevant matter you want to ask him about?

Mr. Keating: I want to ask him about this coal pile.

The Court: That is apparent.

Mr. Keating: I think there is considerable question about it.

The Court: It may be a confused condition but not as that picture shows.

By Mr. Keating:

Q. Mr. Starr, will you please look at Exhibit 28. I ask you to assume that in June, 1926 a quantity of Morrisdale coal was dumped from the main deck down into No. 3 tween deck, which is the space that has been described to you by both me and Mr. Jones. You have the space in mind?

A. Yes, sir.

Q. Will you draw the space and position of the coal pile when it was put in and as it was trimmed?

Mr. Jones: Now, if your Honor please, I think that is purely hypothetical.

[fol. 650] The Court: Overruled.

Mr. Jones: I will take an exception.

A. Can I explain a trim in my own words rather than make a sketch?

The Court: Yes.

A. In No. 3 tween deck space——

Mr. Jones: If your Honor please, they could have proved how the pile was trimmed. They had all that evidence in

their possession. Now they call somebody to express an opinion—that is all they had called him for. I wish to note that objection at this time. I think it is quite improper.

The Court: He can tell how the coal went in there. Professor Parr has been asked and testified that the big lumps worked against the bulkhead.

Mr. Keating: This coal came down through the hatch and I think it is quite important that your Honor should see exactly what happened when this character of coal is dropped down into a pile in the center of the hatch, what became of the lumps and what became of the finds.

The Court: I will let him testify to that.

By Mr. Keating:

Q. Confine yourself to that, Mr. Starr.

The Court: Certainly you can tell us what would be the [fol. 651] normal condition as to the lumps and finds of that coal after it was dumped down the hatch on to the floor of tween deck No. 3.

The Witness: Can I tell you without putting it on the record? Because you have very apparently a misconception.

Mr. Jones: I object.

Mr. Keating: I ask your Honor to allow this witness to give us an explanation of the coal pile, with its finds and big pieces and the position; assuming it was dumped down, as the testimony shows in this case, what its position would be.

By Mr. Keating:

Q. Assume it was dumped down the hatch on to the floor tween deck No. 3. Now, you can tell us what your conception of that pile would be.

A. My conception was based on actual experience in many cases where I had actually shoveled coal in almost identically the same situation. The procedure is that coal is dumped down through a hatch on to the floor; in this case a central hatch, in the No. 3 tween deck, and it is there taken up in shovels and thrown away from the hatch.

By the Court:

Q. Immediately?

A. Immediately.

Q. Before it forms any cone?
A. It depends entirely on the method of operation.
Q. That is it.
A. It doesn't make any difference because——
Q. We have to assume that it was left to form into a cone.
A. Certainly.
[fol. 652] Q. Now, describe that cone to us.
A. The cone in a general way would take that figure. Now, this is exaggerated to illustrate the point (referring to page 6, Exhibit 28, figure 6).
Q. I realize that is exaggerated. Everyone knows that.
A. We take a form——
Q. But there would be a tendency to take that form?
A. A tendency governed entirely on the type of coal, the percentage of lumps and finds.

By Mr. Keating:

Q. Take Morrisdale coal.
A. Can I take the coal as testified?
Q. Yes, Morrisdale.

The Court: The only testimony we have is with respect to Morrisdale run of the mine coal.

Q. Yes, take run of the mine coal.
A. Morrisdale.

The Court: Do you know that?
The Witness: I am very familiar. It has a relatively small percentage of lumps, and such a picture would be increasingly impossible.

By the Court:

Q. With such lumps as it had had?
A. It would roll down below, but not in the proportion shown here.
Q. We all agreed on that.
A. Now, I assume that a cone of a certain size is developed on a hatch. In actual practice I have never seen a big cone.
[fol. 653] Q. We can assume. We don't want——
A. I am talking about the general practice.

By Mr. [illegible]:

Q. Assume a large one.

A. While the men attack that with shovels, throw it toward the sides, assuming a very large one, the first one or two shovels may well have lumps, nothing but lumps, and then you begin to get into a mixture of lumps and fine coal. As long as the percentage of lumps in that side run of the mine coal is very small you would very soon get to small coal, and you would soon pile up a slanting pile in the corner near the bulkhead and would very rapidly increase with the lads and every shovel of coal from then on, any lumps that struck that slanting side would run down. You would eventually get something—there is your steel bulkhead.

Q. I think you are referring to line B-C?

A. I mean there is the bulkhead. I am assuming to be on the starboard side of the ship a steel bulkhead, and you would eventually get a slanting pile. Assume that is five or six feet high where the lumps had rolled down and had formed something like that appearance, not perfect of course, but any lumps striking a slanting side will roll down and lie on the lumber floor. You not only get that appearance in shoveling your coal against the side, but the appearance of the coal at the side when it is removed on every bunker I have ever seen.

Mr. Hines: If your Honor please, I move to strike out the answer as purely conjecture. They had every opportunity to call their people to tell how it was piled. They haven't [illegible] called them and I ask that this answer be stricken out as purely conjecture.

The Court: I will allow it to stand and give you an exception.

Mr. [illegible]: It doesn't change my opinion in the slightest that this was the situation with the bulkhead running down the center of that pile. It was a confined situation caused by shoveling the coal over against the wall here. It will be more or less confined in it certainly shouldn't be. I will make that finding right now, but I will let the testimony stand to allow the appeal court to determine whether it is right or wrong.

By Mr. Keating:

Q. You have heard Mr. Parr testify this morning as to the hot spot?

A. I heard of an assumed hot spot. You mean the one 18 feet from the bulkhead?

Q. Yes. Do you agree that that hot spot 18 feet from a bulkhead might have been developed from some air that may have seeped through the bulkhead?

Mr. Jones: I object to that. I have Mr. Cary's testimony and I have the evidence of the man who put the ratline down there.

The Court: Of course, by the time the line was put down in the hole, the whole thing may have been very hot. I will allow the question with an exception.

[fol. 655] A. In my opinion it would be absolutely impossible for air not under pressure, in the sense of a blower, in the sense of being blowed by a blower, for air to seep 18 feet.

The Court: Mr. Keating, he told me about this pressure. I don't think you will impress it with repetition.

Mr. Keating: I will withdraw it.

Q. Mr. Starr, there has been testimony offered in rebuttal that a steel bulkhead which is not originally water-tight will rust water-tight.

A. It is impossible.

Q. Will it rust air-tight?

A. It will not.

Q. What happens?

A. Rust, as the ship works, is the very worst enemy of air-tightness and water-tightness.

Q. Did you hear this bulkhead described by Mr. Stanley, this air-tight wood bulkhead?

A. Yes, sir.

Q. Will you state whether or not in your opinion such a bulkhead, as described by him, would remain air-tght?

A. Could not possibly remain air-tight.

The Court: Why?

The Witness: When working the ship, the drying out of the paste, any pieces of cargo against the paper, if the paper is over the battens there will be air channels under

the battens and no means of pasting will make that absolutely air-tight. In service conditions on board ships such a bulkhead could not be considered air-tight. The attempt is made to make it dustproof.

[fol. 656] By Mr. Keating:

Q. Mr. Starr, you heard his Honor ask some questions about the air pressures and the difference in the air pressures between No. 2 and 3 'tween decks. Will you state to his Honor your opinion with respect to which way the pressures would be and how they would be determined?

A. There would be nothing, except a very, very slight pressure differential——

Mr. Jones: Your Honor, this is not proper rebuttal. All I did was to put on my witnesses to rebut what my opponent's men said.

The Court: If the Court wants to take it. I will give you an exception.

A. (Continued.) There would be a very slight difference in pressure, the actual air pressure either above or below atmospheric pressure in those two compartments. That difference would be so slight that in my opinion it would not be considered as forcing air or drawing air to the other side. That pressure might vary every half hour, depending upon the shift of wind or trim of the ventilators.

By Mr. Keating:

Q. Can you tell which way it might be?

A. It might be forward.

Cross-examination.

By Mr. Jones:

Q. I believe you never went to sea except in naval vessels?

A. Yes, sir; I have gone to sea in other than——

[fol. 657] Q. As an officer of ships?

A. Not in the merchant service. I have never served on merchant service.

Q. You have served on naval ships only?

A. During the war I went to sea on other than naval vessels in my capacity as naval officer.

Q. You have had experience with plates rusting, through leaky rivets which rust and stop the leakage?

A. Stops leakage temporarily but never permanently.

(Witness excused.)

Mr. Keating: If your Honor please, I wish to offer in evidence the bills of lading produced by Mr. Jones which I understand cover all the shipments in the so-called Cudahy libel.

Mr. Jones: I suggested to Mr. Keating, with respect to that libel, if your Honor please, that we let that stand for the time being; that without prejudice to either side, either side may produce in evidence anything in connection with that particular libel. We don't want to take advantage of each other, so I think any connection that may rest in respect of that libel may be dealt with hereafter. No answer has been filed yet, but I told Mr. Keating we wouldn't take advantage of that. It isn't at issue and it isn't here, and I think the better way to deal with it is to leave that matter in statu quo.

My friend may rest content that I am not going to take advantage of any technical position, and I know he will not take advantage of any technical position.

[fol. 658] I think in view of the pleadings of the case it would be well to leave that in abeyance.

Mr. Keating: When Mr. Jones said to me that he understood I am not going to take a technical position, I claim this suit was filed too late.

Mr. Jones: I don't call that technical. I call that a real defense.

If your Honor please, we both want to submit memoranda, and it is necessary for me to go to Europe on some very important business. I wonder whether your Honor could set some day in January to argue the case or submit briefs.

The Court: There is no hurry. Suit your own convenience. You do not have to take up the question of when you want to submit. If you want to argue I will set a time.

(Short discussion off the record.)

The Court: Just submit the briefs.

Mr. Keating: One of us ought to serve the brief on the other and answer.

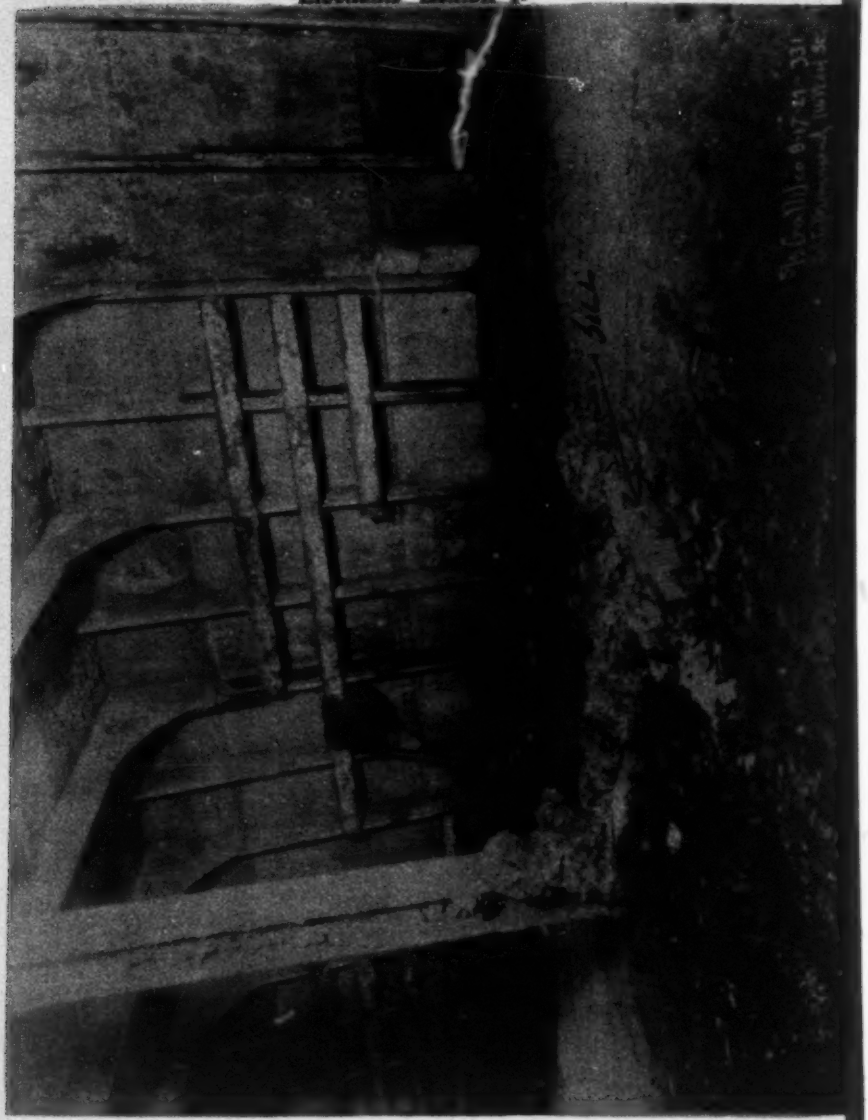
The Court: I suggest that each serve a brief and exchange it and then each reply to his opponent's brief, if he wants to reply.

Mr. Keating: I think one of us ought to serve his brief on the other party as a moving party and the other party——

Mr. Jones: I would prefer your suggestion, your Honor.

The Court: Two principal briefs and two replies.

Libellants' Exhibit 1.



659-A

[fol. 659] LIBELLANTS' EXHIBIT 1

(Photoprint, side folio 659-a)

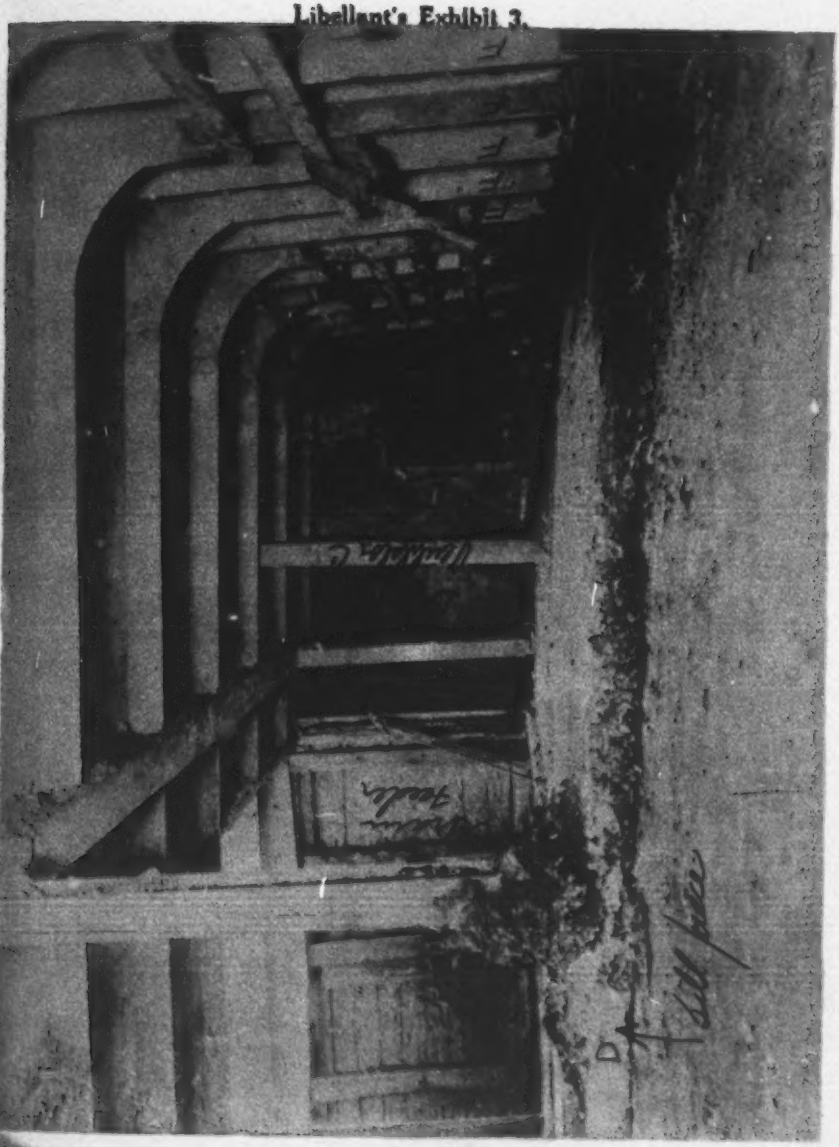
[fol. 660] LIBELLANTS' EXHIBIT 2

(Photoprint, side folio 660-a)

Libellants' Exhibit 2.

660-A

Libellant's Exhibit 3.



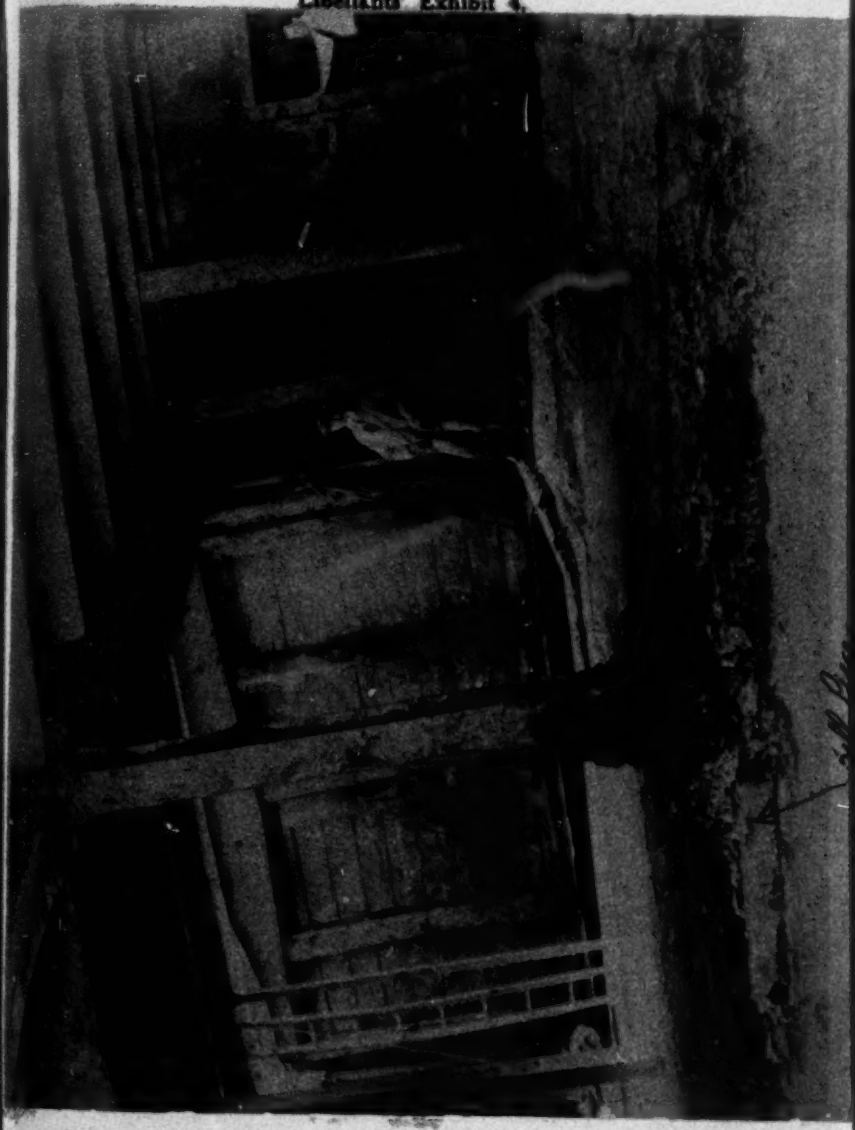
[fol. 661] LIBELLANTS' EXHIBIT 3

(Photoprint, side folio 661-a)

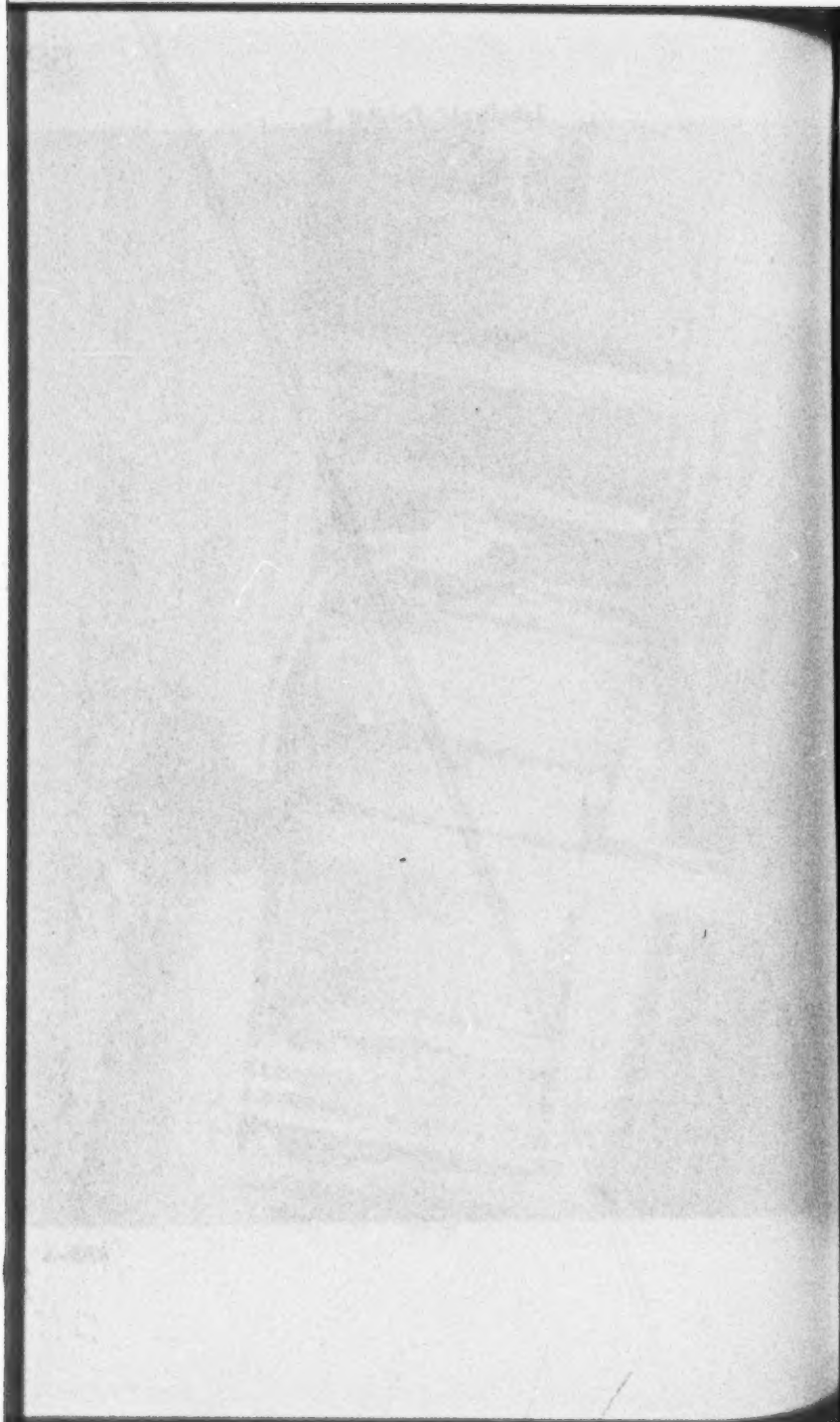
[fol. 662] LIBELLANTS' EXHIBIT 4

(Photoprint, side folio 662-a)

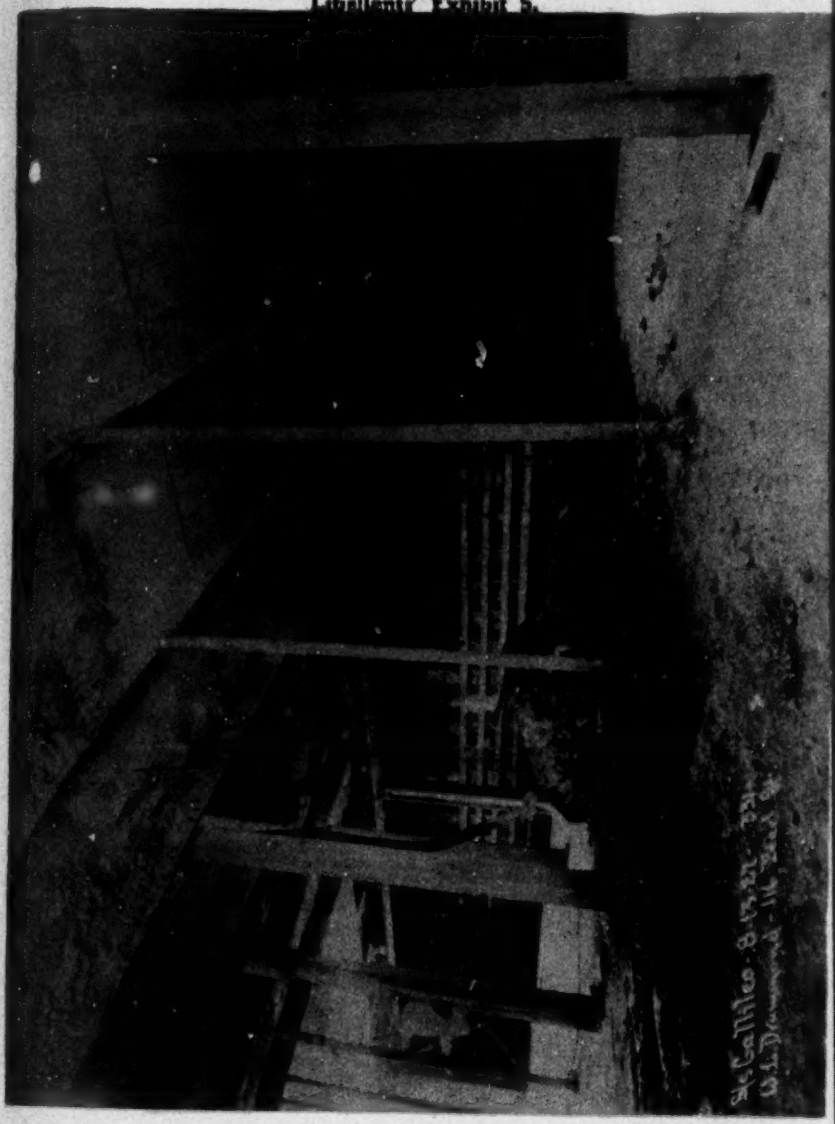
Libellants' Exhibit 4.



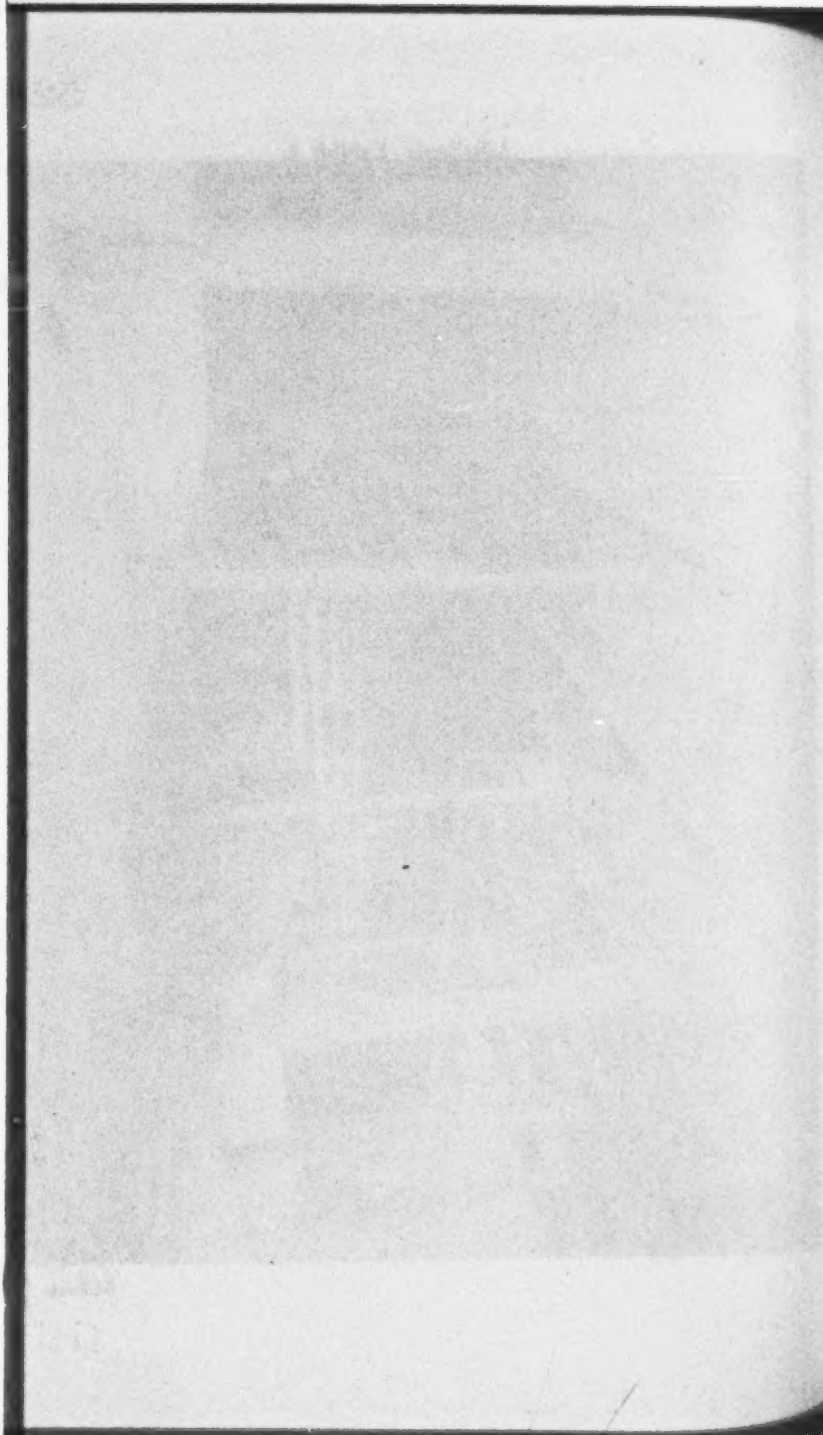
652-A



Libellants' Exhibit 5.



663-A



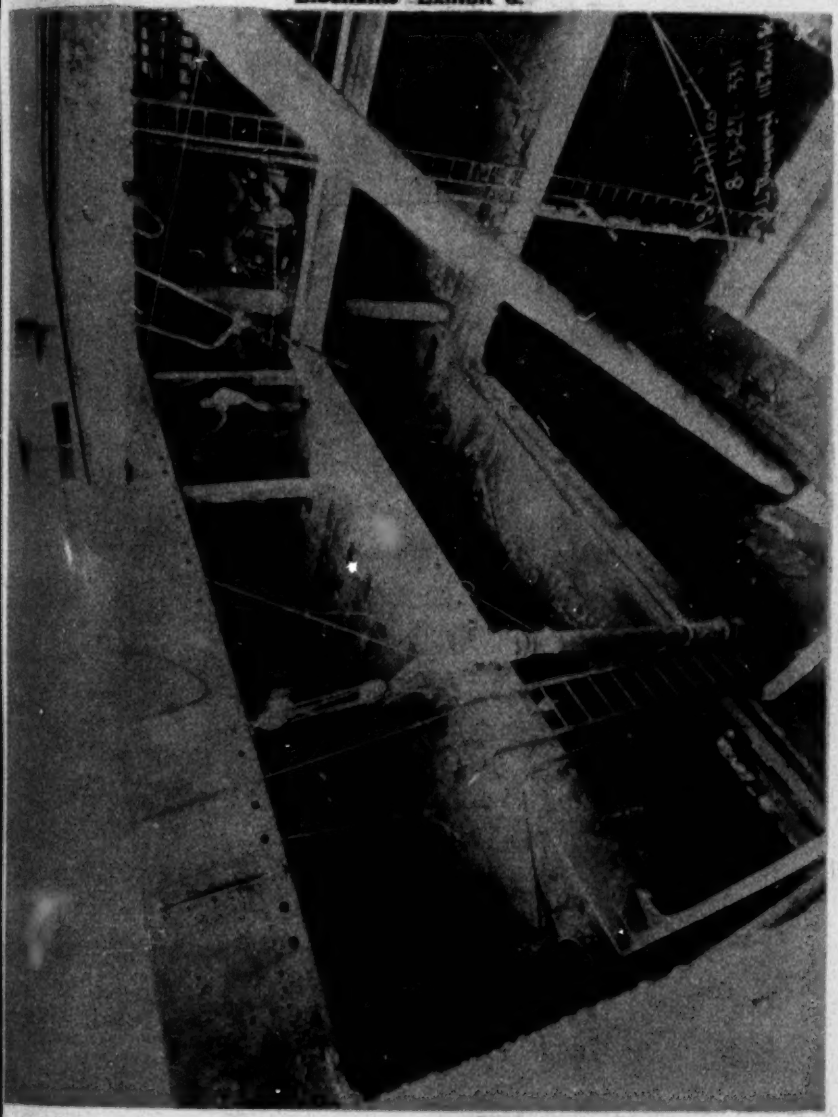
[fol. 663] LIBELLANTS' EXHIBIT 5

(Photoprint, side folio 663-a)

[fol. 664] LIBELLANTS' EXHIBIT 6

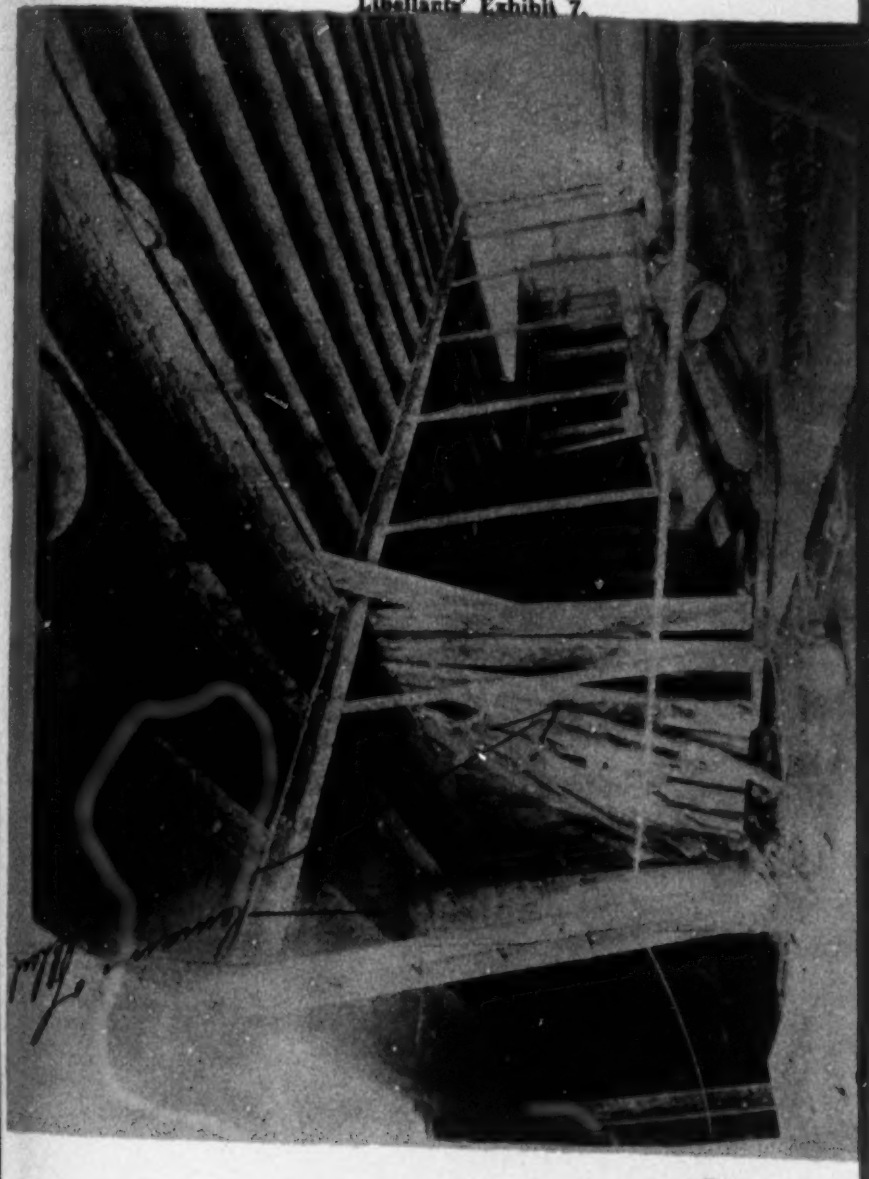
(Photoprint, side folio 664-a)

Libellants' Exhibit 6.



661-A

Libellants' Exhibit 7.



665-A

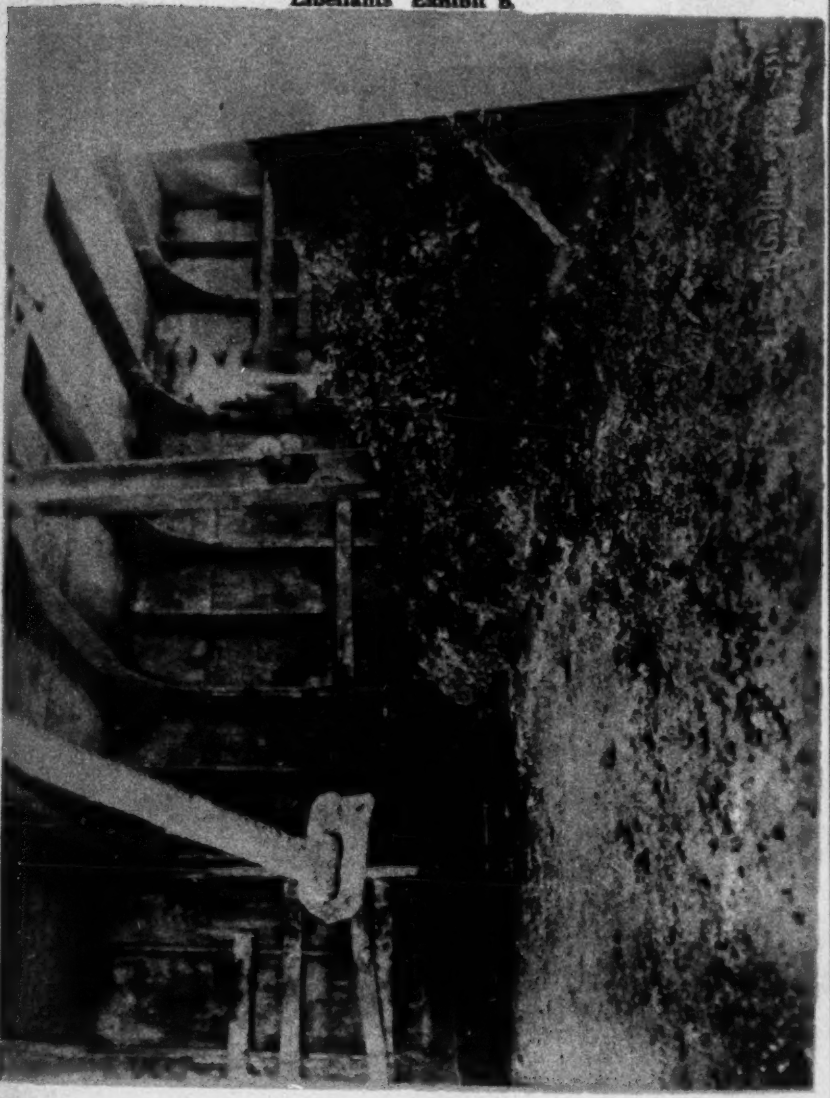
[fol. 665] LIBELLANTS' EXHIBIT 7

(Photoprint, side folio 665-a)

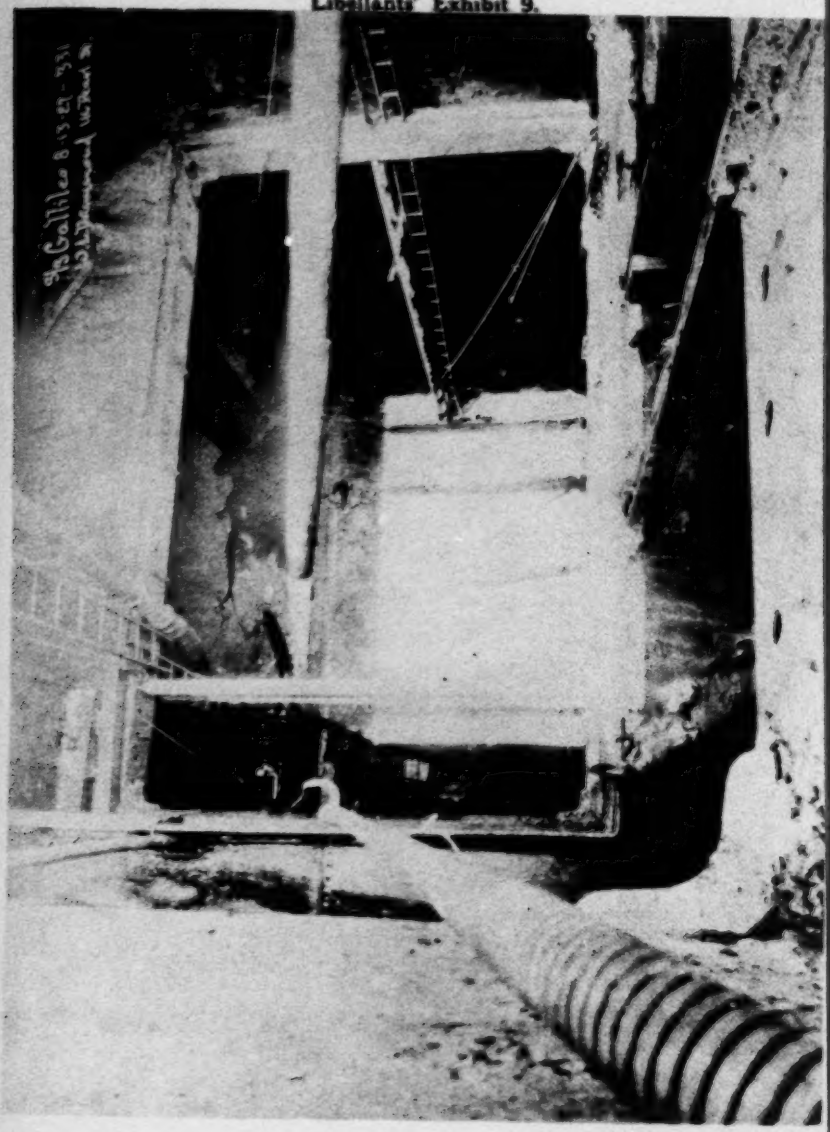
[fol. 666] LIBELLANTS' EXHIBIT 8

(Photoprint, side folio 666-a)

Libellants' Exhibit 8



Libellants' Exhibit 9.



667-A

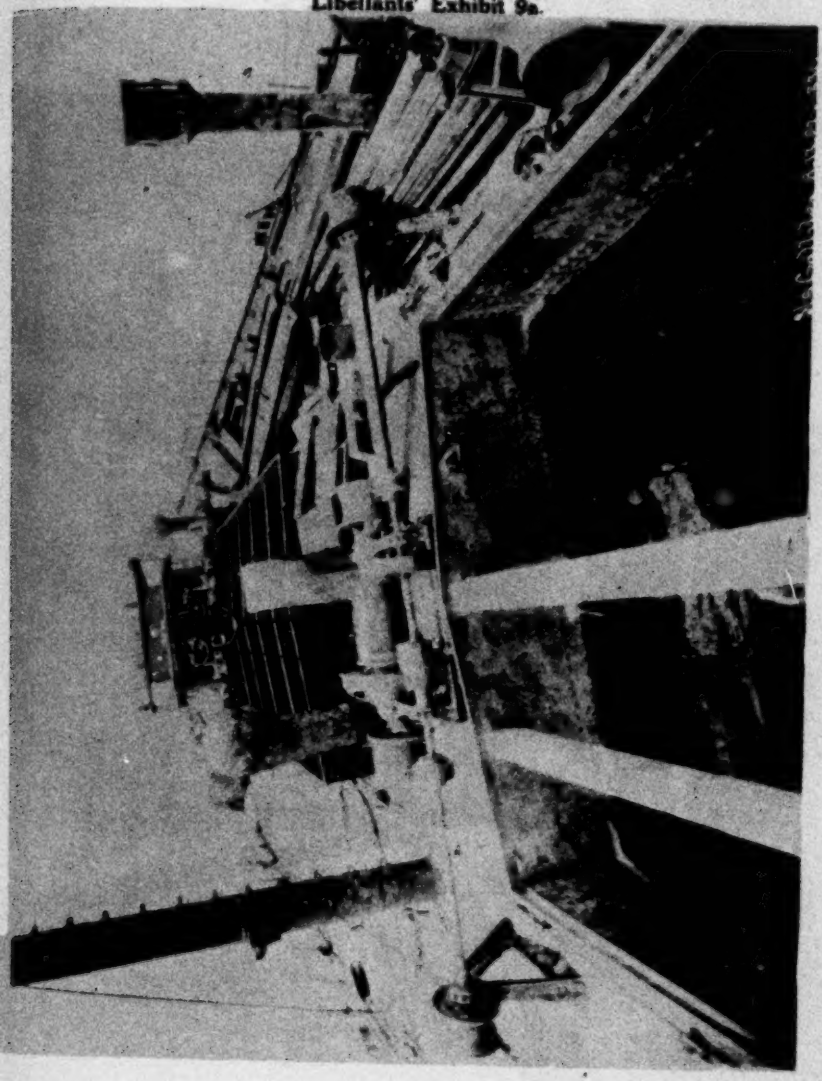
[fol. 667] LIBELLANTS' EXHIBIT 9

(Photoprint, side folio 667-a)

[fol. 668] LIBELLANTS' EXHIBIT 9a

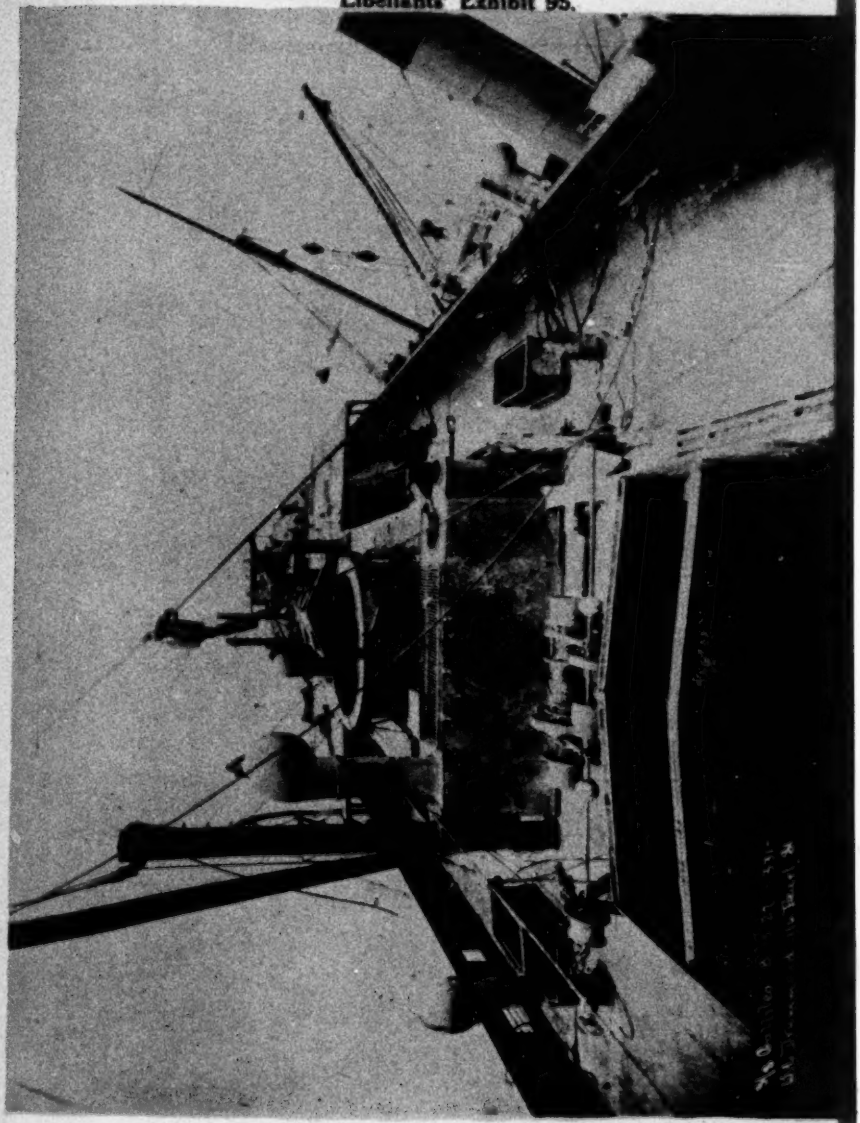
(Photoprint, side folio 668-a)

Libellants' Exhibit 9a.



668-A

Libellants' Exhibit 9b.



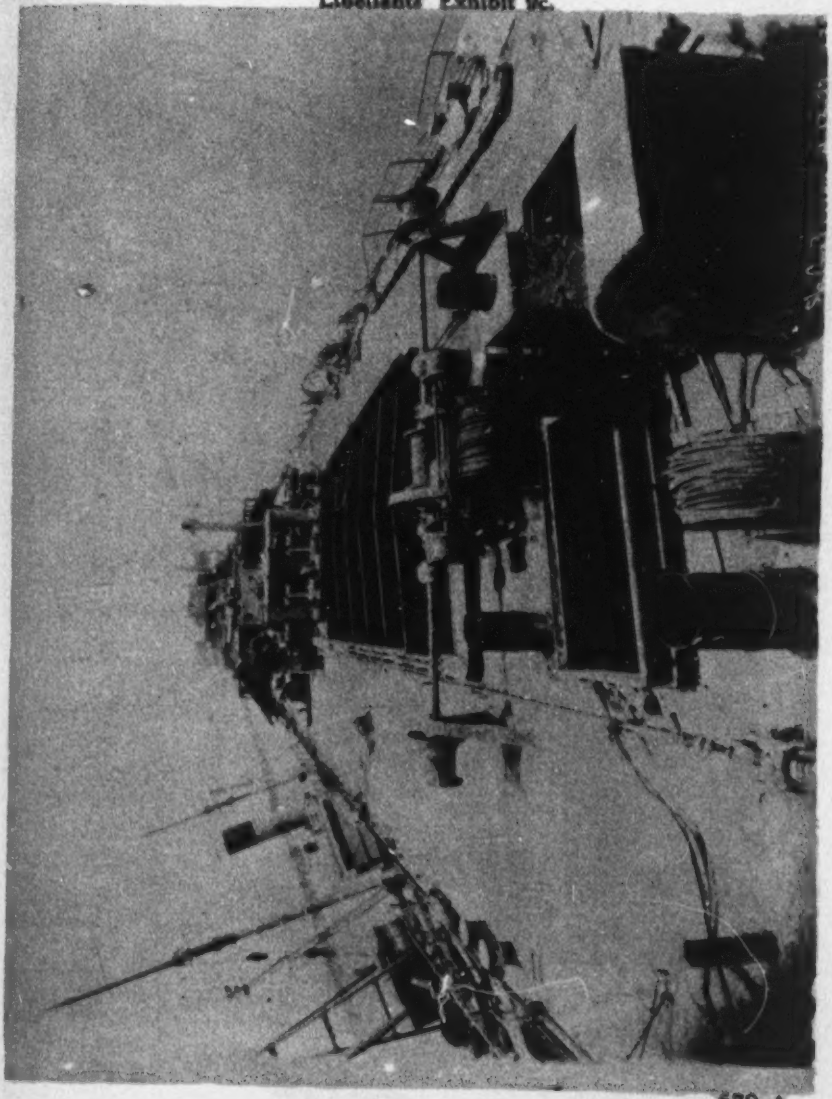
[fol. 669] LIBELLANTS' EXHIBIT 9b

(Photoprint, side folio 669-a)

[fol. 670] LIBELLANTS' EXHIBIT 9c

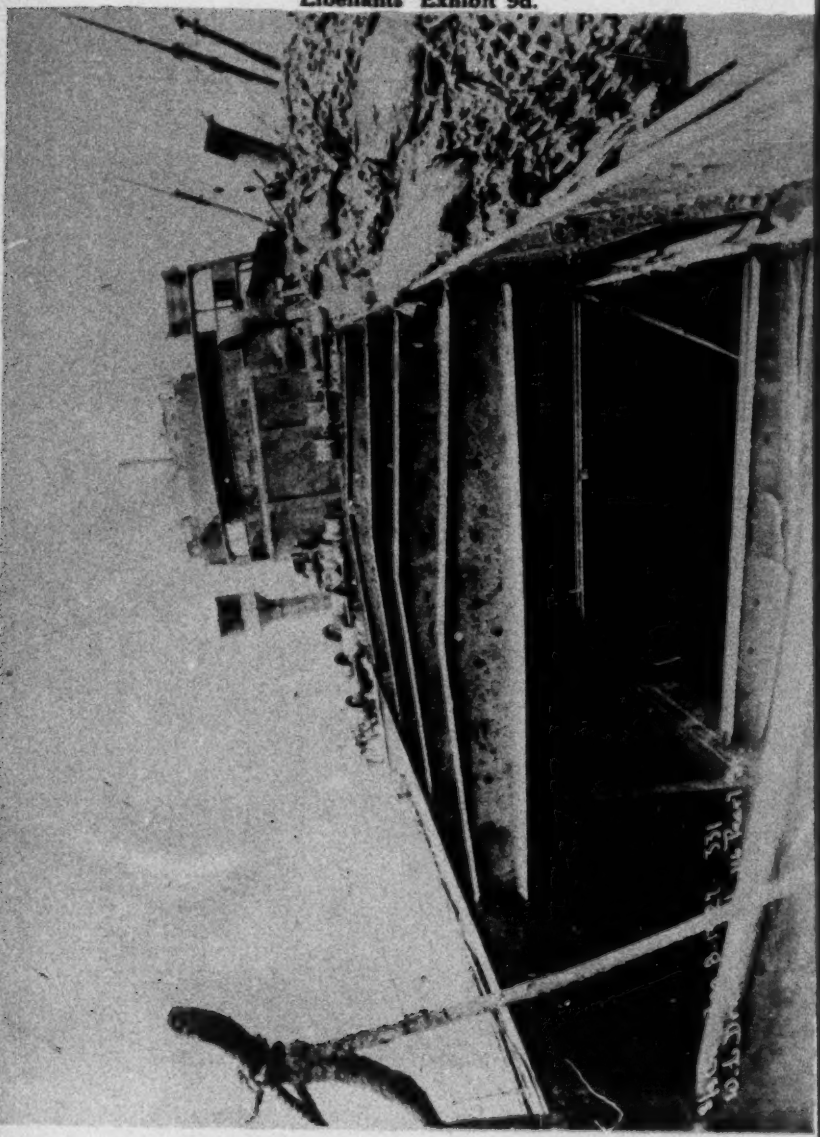
(Photoprint, side folio 670-a)

Libellants' Exhibit 9c.



670-A

Libellants' Exhibit 9d.



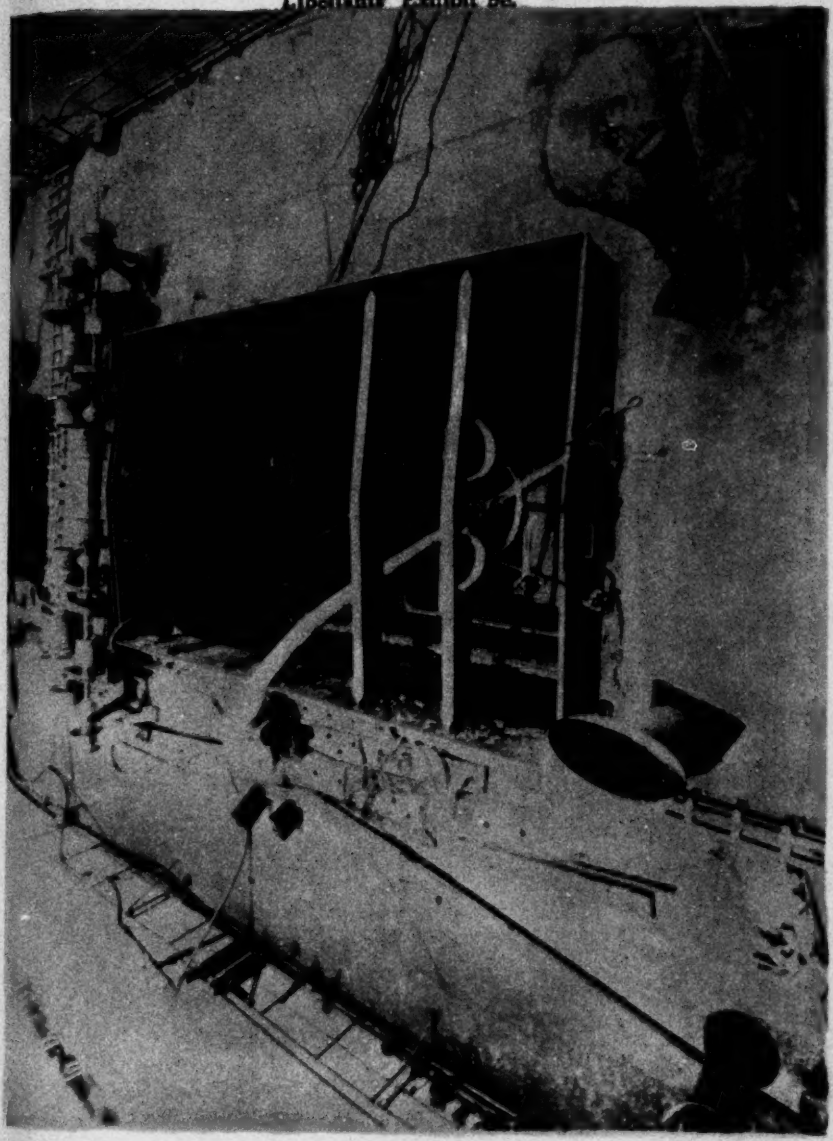
[fol. 671] LIBELLANTS' EXHIBIT 9d

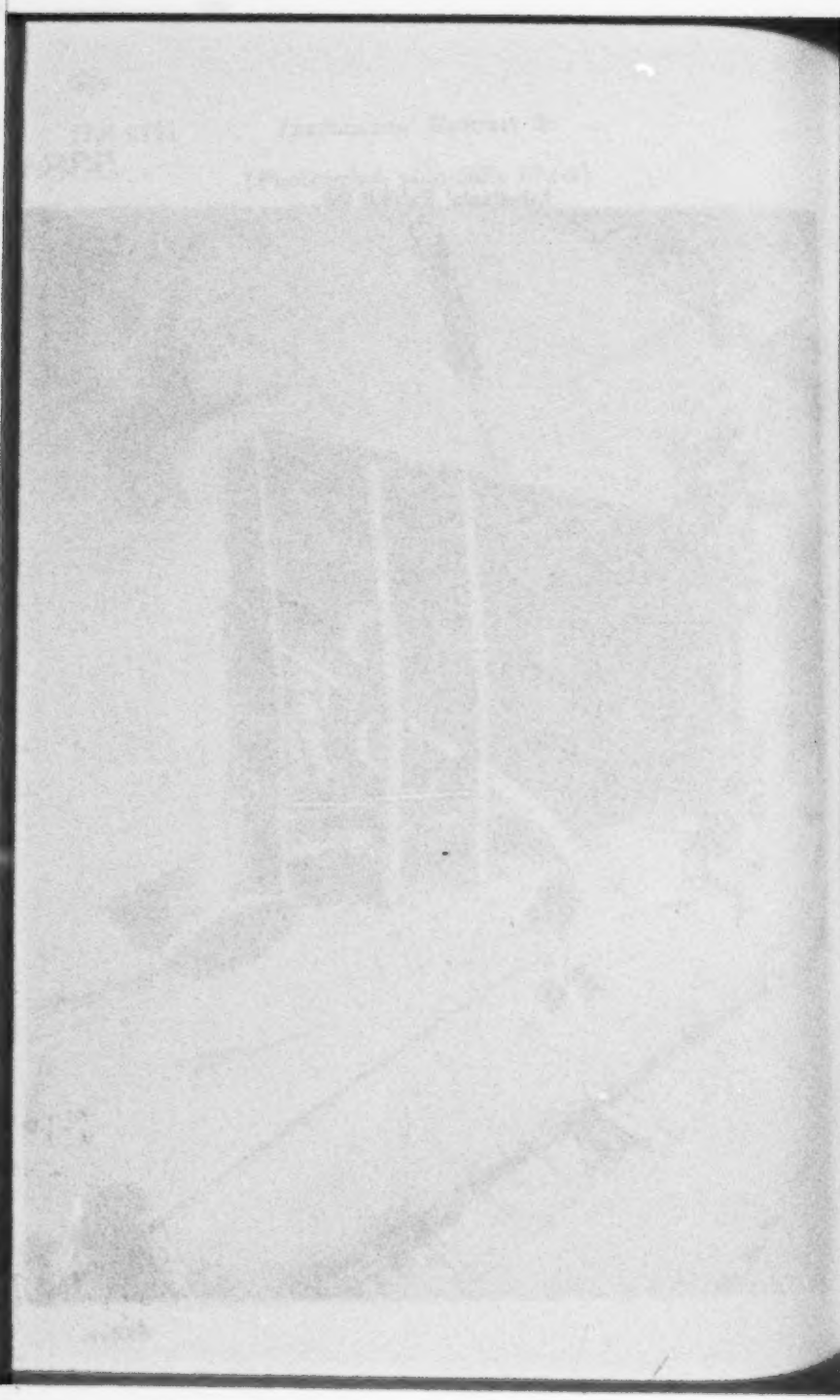
(Photoprint, side folio 671-a)

[fol. 672] LIBELLANTS' EXHIBIT 9e

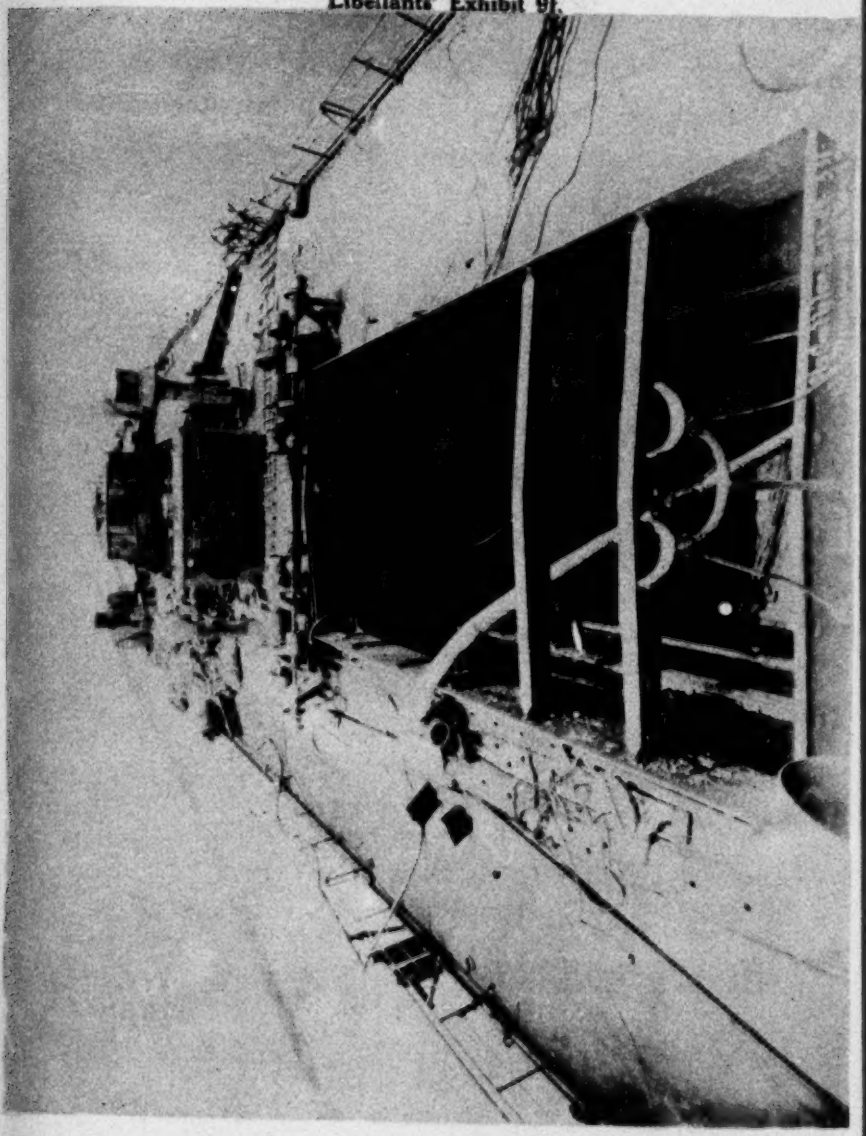
(Photoprint, side folio 672-a)

Libellants' Exhibit 9a.





Libellants' Exhibit 9f.



[fol. 673] LIBELLANTS' EXHIBIT 9f

(Photoprint, side folio 673-a)

[fol. 674] LIBELLANTS' EXHIBIT 10

(Photoprint, side folio 674-a)

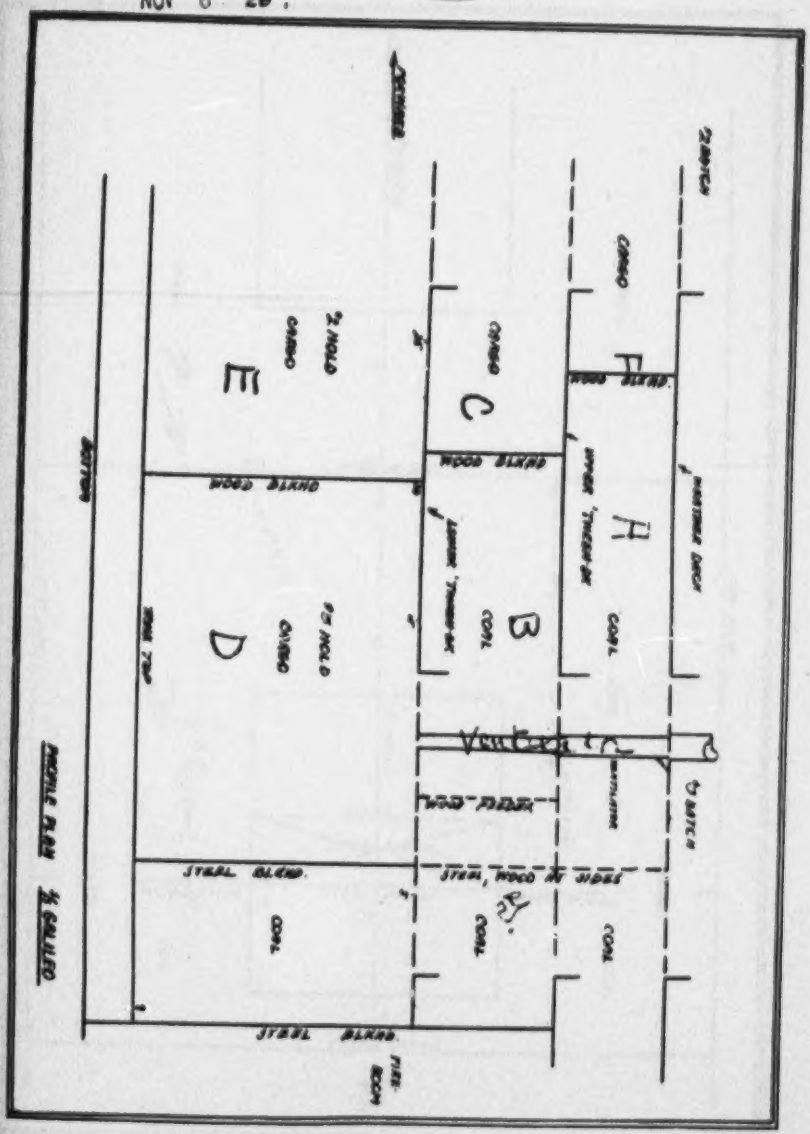
Libelants' Exhibit No.

540A

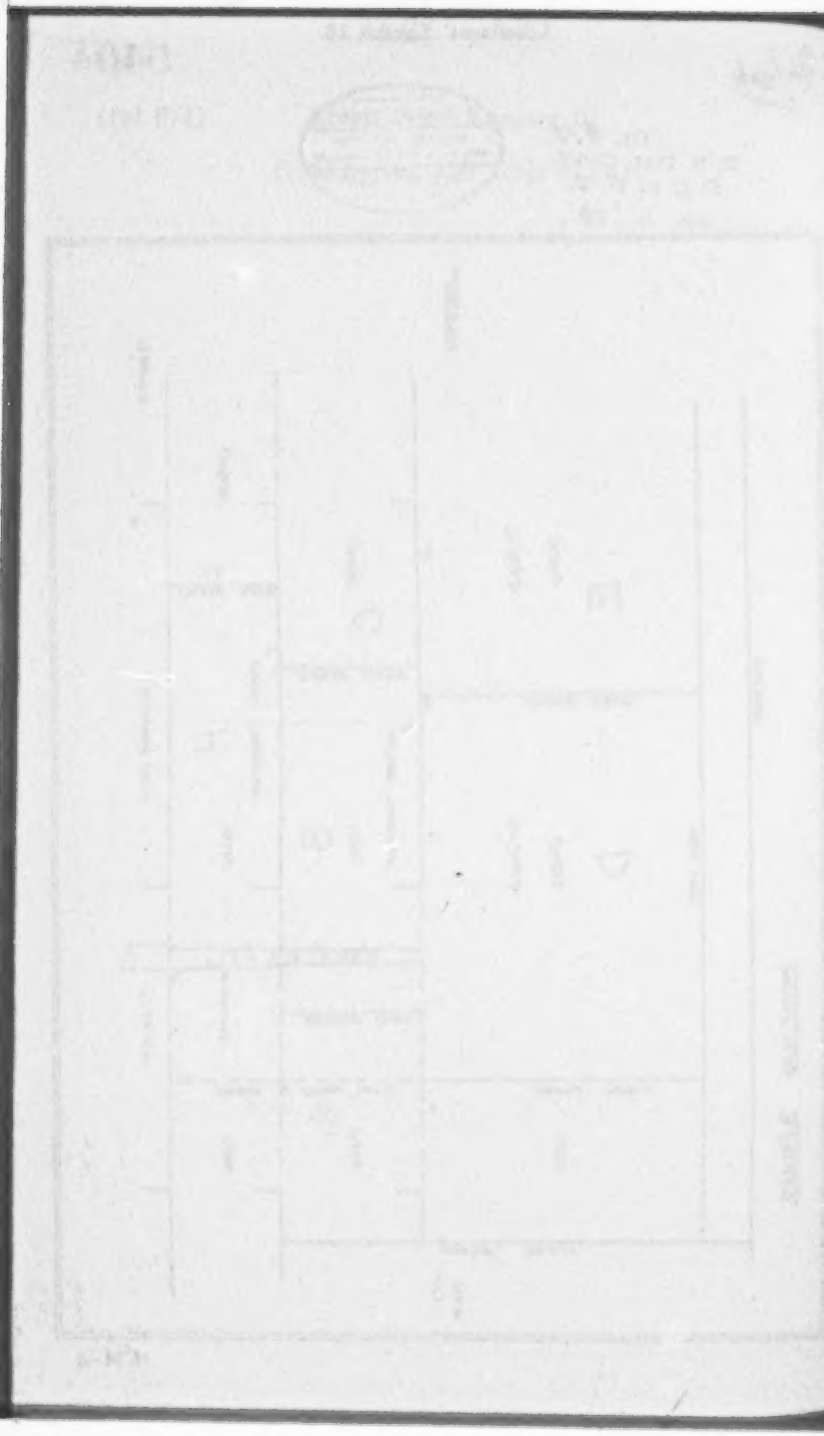
96/206

Ex. #10
U. S. Dist. Court,
S. D. of N. Y.
NOV 6 '29.

H. A. RIEGER



674-A

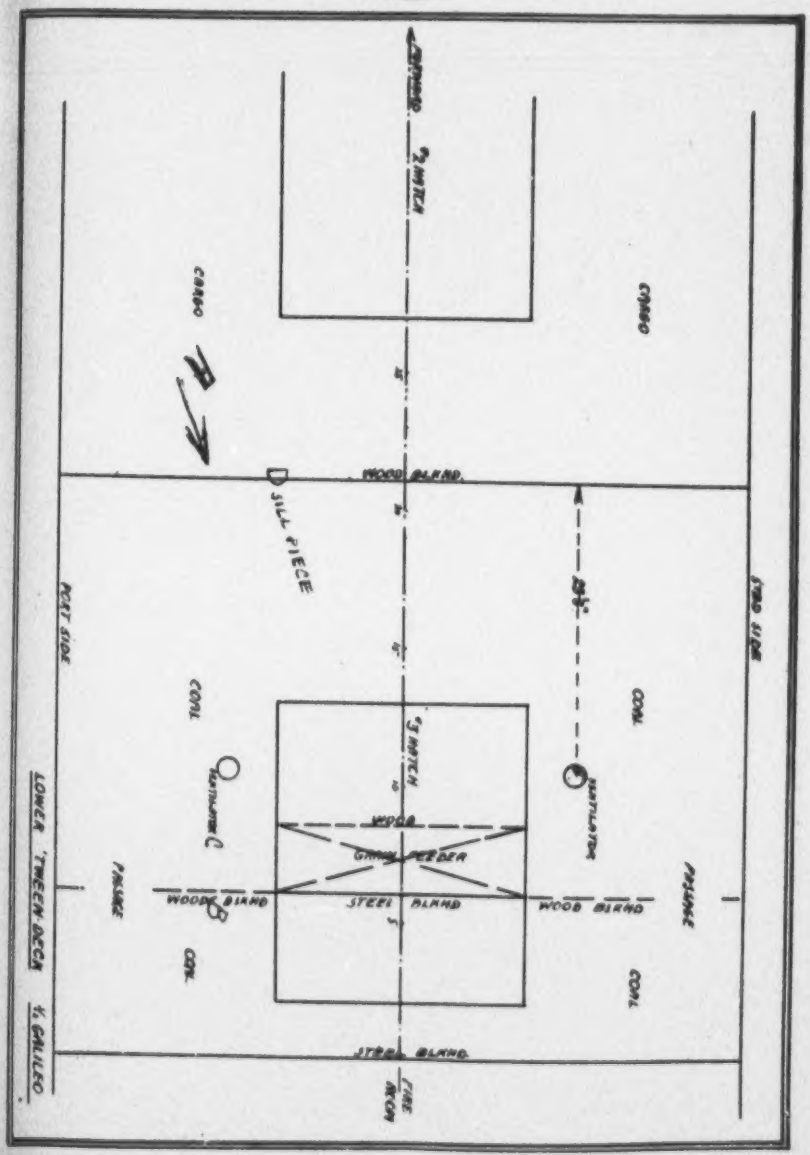


Libellants' Exhibit 11.

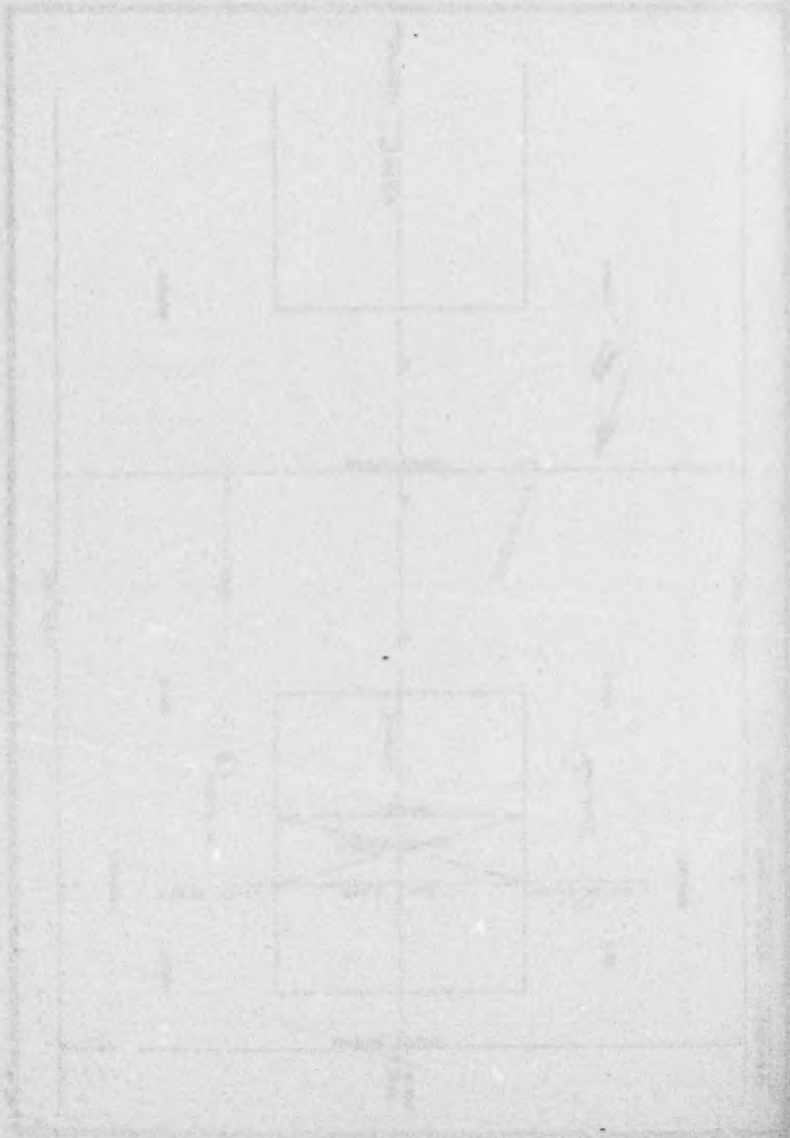
540B

96/306.

Ex. #11
U. S. Dist. Court
S. D. of N. Y.
NOV 6 '29.



675-A



[fol. 675] LIBELLANTS' EXHIBIT 11

(Photoprint, side folio 675-a)

[fol. 676] LIBELLANTS' EXHIBIT 12

(Photoprint, side folio 676-a)

Libellants' Exhibit 12.

B

Ex. 4/2
U. S. Dist. Court
S. D. of N. Y.
NOV 6 20

542A

676-A

FOLD OUT IS TOO LARGE TO BE FILMED

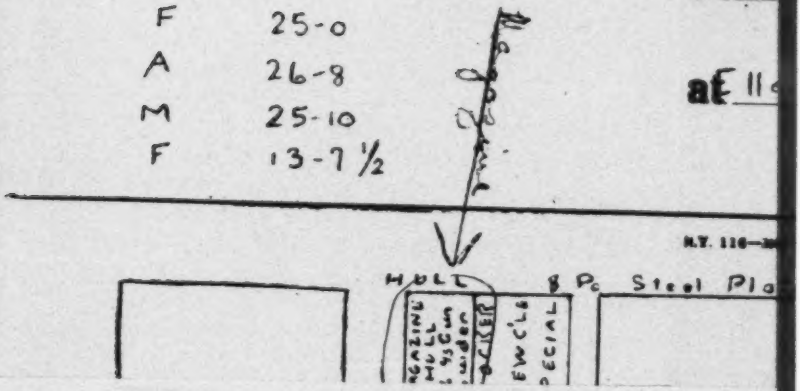
Libellants' Exhibit 13.

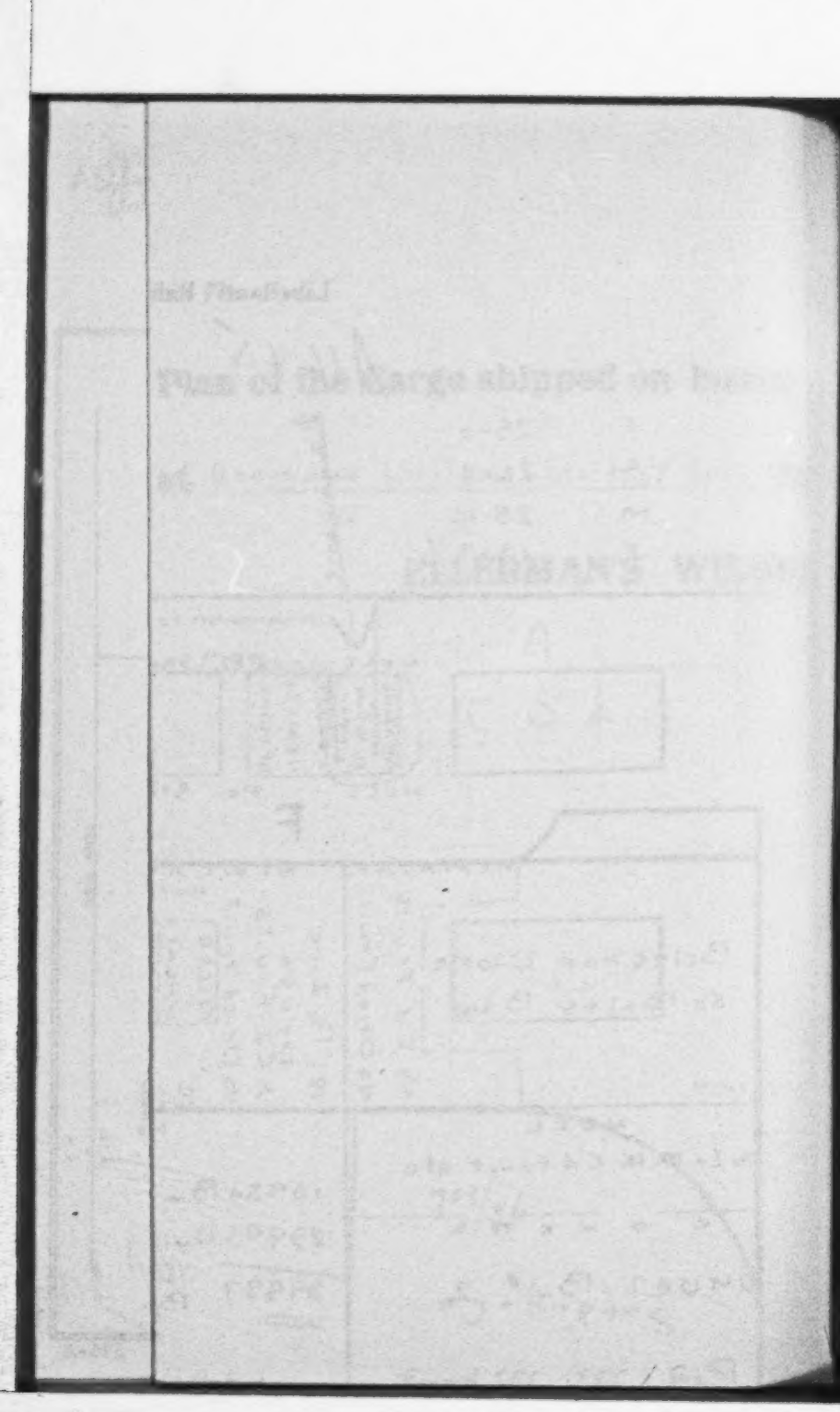
A1645

- Plan

at 11

F 25-0
A 26-8
M 25-10
F 13-7½





[fol. 677] LIBELLANTS' EXHIBIT 13

(Photoprint, side folio 677-a)

[fol. 678] LIBELLANTS' EXHIBIT 14

August 20th, 1927.

Messrs. Bigham, Englar & Jones, # 64 Wall Street, New York, N. Y.

DEAR SIRS:

Re British S/S "Galileo"

As requested we proceeded on board this vessel on August 12th, 1927, for the purpose of a-certaining the place of origin of the fire which occurred on this vessel late in 1926 and which culminated in her sinking off Weehawken, N. J. The vessel lay sunk on her beams end and most of her cargo was removed through holes cut in the port shell. Subsequently the vessel was salvaged by the Merritt-Chapman & Scott Corp., and taken to Gravesend Bay, Brooklyn. We found the vessel lying listed about twenty-five degrees to starboard and the salvors engaged in cleaning up.

This vessel is of the shelter-deck type with three steel decks. The side or shell frames are spaced twenty-seven inches in the holds, lower 'tween-deck, and upper 'tween-deck (or shelter-deck) spaces but the deck beams for the two lower decks are on alternate frames while the weather deck beams are on every frame. The enclosed sketches show the arrangement of the hatches, bulkheads, etc., forward of the forward boiler room bulkhead. This bulkhead is of steel extending from the D. B. tank top to the upper 'tween-deck. There is a steel bulkhead twelve feet forward of this which extends up to the weather deck but in the lower and upper 'tween-deck spaces it is of steel only [fol. 679] in the hatchways while at the sides or wings of these compartments it is of wood covered with burlap and fitted with passageways. In the lower 'tween-deck compartment this steel bulkhead serves as the after part of the grain feeder for # 3 hatch extending five feet fore-and-aft, the width of the hatch, and from the lower 'tween-deck to the upper 'tween-deck. There is a wooden bulkhead between the # 2 and # 3 lower holds. In the lower 'tween-deck there has evidently been a wooden bulkhead at the 21st frame forward of the boiler room bulkhead as on the portside of the deck there is a piece of the sill remain-

ing which is commed or shored off from a nearby stanchion. Also there is a quantity of caked coal and grease at this place about fifteen feet athwartship, one to three feet fore-and-aft and three inches to two feet high. On the starboard side there is also a pile of coal and grease about twelve feet athwartship, six feet fore-and-aft, and two to three feet high. These two piles are banked up square at the forward edges indicating the presence of a bulkhead, subsequently removed. The upper 'tween-deck space has had a light wooden bulkhead about seven feet aft of the after end of # 2 hatch; some of the bulkhead is still in place.

The lower 'tween-deck plating and beams show no distortion. The wooden sills at the hatches are not scorched nor are the fore-and-aft shifting boards in the hold underneath effected. However, the sides of the lower 'tween deck are somewhat blistered, especially along the port side abreast of the after end of # 2 hatch where the cargo battens were badly burned. The overhead deck (upper 'tween-deck) was badly distorted just aft of the # 2 hatch and [fol. 680] especially to port of the center-line. The beam forming the after end of # 2 hatch was scorched and very slightly buckled; the first beam aft of this was badly buckled from the bracket at the port side to about four feet to starboard of the centerline; the next beam aft of this was badly buckled from the bracket at the port side to about twelve feet to starboard of the centerline; the next beam aft of this was buckled on the port side and close to the centerline; the beams abaft of this were little if any distorted. The plating of the upper 'tween-deck in way of these beams was badly buckled. The fore-and-aft deck stringer extending between the port coamings of the # 2 and # 3 hatches was buckled from the after end of the # 2 hatch to just abaft the piles of caked coal and grease.

It was evident that the fire had been in the lower 'tween-deck and quite local in extent inasmuch as the distorted parts are confined to the limited area described above and indicated on the enclosed sketches. The hottest part of the fire has been from the after end of # 2 hatch to the wooden bulkhead between the # 2 and # 3 hatches in a fore-and-aft direction and from about five feet to starboard of the

centerline to about twenty feet to port of the centerline in an athwartship direction.

It is obviously impossible to ascertain from an inspection at this time whether the fire started forward or aft of the wooden bulkhead at this place. The fire has been hottest forward of the bulkhead but this may be due to the nature of the cargo. We note from the extract of the vessel's log-book dated at 4:35 p. m. August 28th, 1926, "smoke was observed coming from the forward starboard [fol. 681] ventilator at No. 3 hold". This ventilator leads to the 'tween-deck space described above and which contained coal. Our investigation indicated that the fire could have had its origin in this space but it is impossible for anyone to state definitely, from the physical evidence now available, where the fire originated. Nothing found by us, however, leads us to doubt the accuracy of the statement which we have quoted from the ship's log.

Very truly yours, Wm. R. Bagger, Alfred E. Jordan, Wm. G. McKennan.

[fol. 682] LIBELLANTS' EXHIBIT 14

(Part Photoprint)

(Here follow side folios 682-a, 682-b, and 682-c)

Libellants' Exhibit 14.

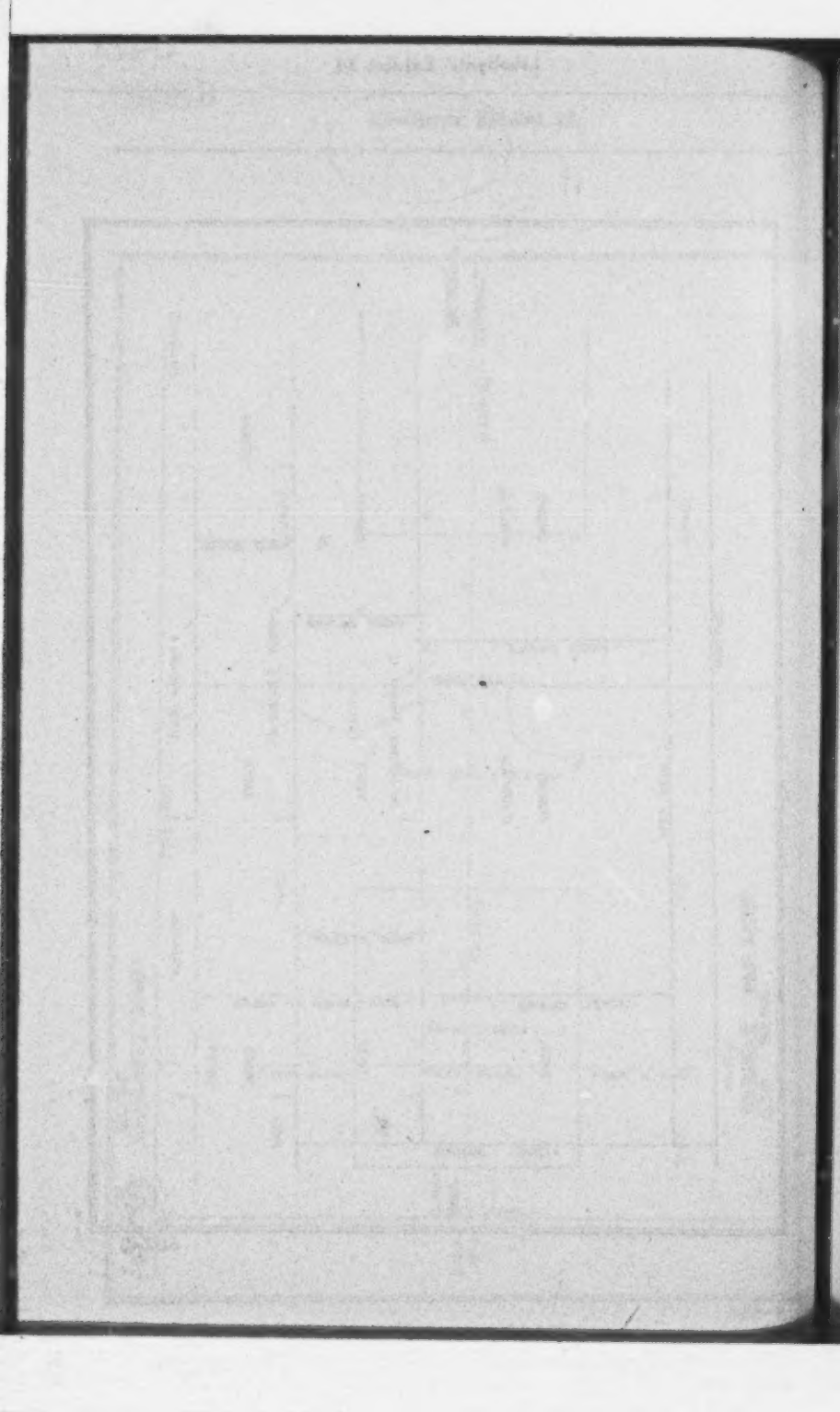
682-A

546B

Libellants' Exhibit 14.

682-B

STARBOARD
5 HATCH
CARGO
WOOD BLKHD.
UPPER 'TWEEN DK.
COAL
WEATHER DECK
4 HOLD
CARGO
WOOD BLKHD.
WOOD BLKHD.
LOWER 'TWEEN DK.
COAL
3 HOLD
CARGO
WOOD FEEDER
3 HATCH
STEEL BLKHD.
STEEL, WOOD AT SIDES.
COAL
COAL
COAL
BOTTOM
TANK TOP
STEEL BLKHD.
FORE-
HOOK
PROFILE PLAN - "M. GALILEO"
682-C



[fol. 683] LIBELLANTS' EXHIBIT 15

26 Aug. 29 AM 5 34.

WNY B G 1.
RADIO SS GALILEO G 11 RCA NEW YORK 32.

Wilsonlyn, New York:

Bunkers in NR 3 'tween deck on fire spreading to cargo NR 2 'tween deck fore part ship full of smoke have got powder on deck must have fire float urgent

Master.

(Phoned Muller Aug. 29 1:29 A.M.)

26 Aug. 29 AM 12 37.

WNY PT 34 RDO RUSH.
SS GALILEO G11 RCNY 16.

Wilsonlyn, New York:

Anchored Shakespeare Bay suggest sending gang off to discharge bunkers now on fire.

Master.

(M M no answer from calls.)
(Actually phoned at P.M. 10:58 August 28th to Muller, Asst. Supt., Hoboken, 7523.)

[fol. 684] 26 Aug. 28 PM 9 38.

WNY PT 31 RDO.
SS GALILEO G11 RCNY 26.

Wilsonlyn, New York:

Bunkers in NR three 'tween deck on fire returning New York arriving Ambrose lightship eight thirty suggest bunkers discharged or shifted to NR two shelter deck.

Master.

(Phoned Muller, Asst. Supt., at 10:58 P. M. Aug. 28th.)
(Hold on desk until Monday Phoned from Muller.)

LIBELLANTS' EXHIBIT 16

Lloyds Register of British & Foreign Shipping

Report by the Chief Engineer Surveyor on the Spontaneous Combustion of Coal

May, 1912

(Pages 16-17)

General Conclusions

After a careful consideration of the conclusions arrived at by the Royal Commissioners of 1875, and by Professor Threlfall, and of the experiments conducted by M. Fayol, it is considered that, without any doubt whatever, coal cargoes should not have any through ventilation, the very thorough ventilation suggested by M. Fayol, by dividing up the cargo into numerous separated layers being quite impracticable. Even if the division could be carried out, there would be great difficulty in arranging such through [fol. 685] currents of air as to ensure sufficient circulation through every place where there was an accumulation of small coal and dust to carry away the heat generated by the oxidation caused by the limited air supply.

The surface ventilation now always provided, if the cowls are properly attended to, is a safeguard against the accumulation above the coal of marsh gas or other inflammable gases evolved from the coal, and the consequent risk of explosion; but it is a question whether this ventilation, supplemented as it frequently is by the opening of the hatches in fine weather, does not aid in producing heating of the coal and the risk of spontaneous combustion, by supplying to the body of the coal the limited quantity of air necessary to permit of the slow absorption of oxygen, which is the cause of the heating of the coals. It would be safer as regards heating if M. Fayol's suggestion of hermetically sealing the holds could be carried out, arranging, however, provision for the escape of the marsh gas evolved during the voyage. If this method could be adopted care would have to be taken to thoroughly ventilate the surface and the vacant spaces in the holds before discharging the cargo. Also as the holds would soon become full

of gas in all the interstitial spaces between the pieces of coal, special attention would have to be given to prevent leakage of dangerous gas through sounding pipes, bilge and deck pump suction pipes, &c. The care necessary, however, would not be greater than that habitually given to such matters in the cases of vessels carrying petroleum in bulk.

From the report of Professor Threlfall, supplemented by the experiments of M. Fayol, it appears that the presence [fol. 686] of pyrites in the coal has not the prejudicial effect which the Royal Commissioners of 1875 supposed, and it is also clear from both these sources that wet or damp coal is not in any way more dangerous to carry than coal which is perfectly dry.

Concerning bunkers, the conditions regarding which are so different from those applying to holds, and in which, while they are being worked, it is necessary to have an ample ventilation throughout, it is desirable that the engineers of the vessels should realize the conditions tending to over-heating and combustion, so that in each particular case they may take such precautions as may be possible. Amongst other points they should understand—

1. That all coal gives off some inflammable gas when freshly worked, and also when freshly broken, and that this gas becomes explosive when mixed with certain proportions of air. It is the evolution of this gas which requires the ventilation of the bunkers before entering them with naked lights.

2. That heating of coal and the consequent risk of spontaneous combustion does not proceed from the presence of gas, but is caused by the absorption of oxygen from the air.

3. That this absorption, and the accompanying development of heat, is greater at high than at low temperatures, so that when once commenced it proceeds at an increasing rate if the supply of air is maintained.

[fol. 687] 4. That where heat is being generated by the absorption of oxygen it is probable that more gas will be evolved. The evolution of the gas, however, does not cause the generation of heat. Where such gas is being evolved, if sufficient supply of air is maintained to provide more

oxygen than is being absorbed, an explosive mixture is formed amongst the coal.

5. To minimise the absorption of oxygen by the coal in reserve bunkers, or in any bunker in which men are not actually working, the lower doors should be kept absolutely closed, so as to prevent any current of air whatever passing through the bunker and into the mass of coals.

6. If there are any parts of bunkers in which, owing to the proximity of boilers, uptakes, or recesses through which steam pipes, &c., are carried, there is likely to be a higher than normal temperature, these parts should, if possible, be stowed with large coal and should be worked out as soon as possible. The shoots should be arranged not to deliver small coal into these places.

7. Small coal which accumulates under shoots, &c., should be worked out as soon as possible and not left till the last.

8. If any coal is left in a bunker when a fresh charge has to be taken in, it should be trimmed into a position to ensure its being used on the next voyage. It cannot be too strongly impressed upon those responsible, that danger of [fol. 688] overheating and spontaneous combustion increases with the length of time the coal remains in the ship.

9. Where bunkers are over gutterways, &c., special care should be taken that the limbers are tight. Several fires have originated in bunkers just over the limbers, and there is reason to suppose that they have been caused by air circulating through the coal and coming from the limbers.

10. There is no risk entailed by the coal being wet when put on board. In fact, in cases where coal is known to be of a fiery nature, it would be of an advantage for the small coal to be damped when charging the bunkers.

11. If heating of any part should occur where there is no traceable external source of heat to account for it, the heating will probably be local only in a part where the coal is small, and the surrounding portions may not be overheated. In attempting to obtain access to the heated parts for the purpose of applying water, special care is needed to pre-

vent the action taken from supplying the air which is needed to convert a heated zone into an actual fire.

12. Although some kinds of coal have proved to be more liable to spontaneous heating and combustion than others, it should be realized that all coal, even anthracite, is liable to these occurrences.

[fol. 689] LIBELLANTS' EXHIBIT 17

For Official Use

Circular 1641

Board of Trade, Marine Department

December, 1922.

Instructions to Surveyors

Surface Ventilation of Coal Cargoes

(Pages 1, 2, 3)

The following instructions relating to the surface ventilation of holds and other compartments containing coal, and to the ventilation of spaces adjacent to such compartments, come into force 1st July, 1923. They differ from the instructions contained in Circular 1197, which they will supersede, chiefly in the following respects:—A new instruction (paragraph 5) has been inserted as to the arrangement and area of Ventilator Orifices. The height and thickness of ventilator coamings as fitted in new vessels, and also of coamings when requiring to be renewed in existing vessels, have been increased in accordance with the recommendations of the Loadline Committee (1915), and the arrangements for securing the coamings to the deck have been substantially improved. See paragraphs 8 and 9. The deck plating is required to be stiffened where necessary in the vicinity of the coamings as recommended by the same Committee. See paragraph 10. New provisions (paragraph 15) have been inserted as to the arrangements necessary [fol. 690] when passenger or crew spaces are situated on a deck forming the crown of a coal space.

1. Object of Instructions.—The object of these instructions is to secure that proper arrangements are made to prevent, as far as possible, explosions due to the accumulation of explosive gases which are always given off from coal in cargo holds and in bunkers.

2. Surface Ventilation to be Provided.—All holds, bunkers and other compartments of vessels in which coal is carried should be provided with an effective system of surface ventilation to ensure the free escape of the explosive gases given off by the coal.

3. Ventilation Into a Mass of Coal is Prohibited.—It should be carefully borne in mind that spontaneous combustion in coal cargoes is due to causes entirely distinct from the giving-off of gases referred to above. Spontaneous combustion is promoted by the introduction of air into a mass of coal, and for that reason Surveyors should not accept any arrangement of ventilators which would deliver air into the body of the coals stowed in any compartment.

4. Action of Surveyors.—The following instructions should be acted on by the Surveyors in future cases in which the surface ventilation of coal cargoes and bunker coal may be dealt with or in which it is considered necessary to order a coal-laden ship to be detained as unfit to proceed to sea without serious danger to human life, owing to insufficient surface ventilation of the cargo or owing to defective construction of the ventilators or their deck fittings.

[fol. 691] Surveyors should note that the requirements of paragraphs 8 and 9, regarding the construction of ventilator coamings, and of paragraph 10 regarding the stiffening of the deck, apply to new vessels the keels of which are laid on or after 1st July, 1923, but these requirements should also be substantially complied with when it is found necessary to renew ventilator coamings in an existing vessel.

The provisions of paragraph 5 (a) to (c) and the last clause of paragraph 12 are recommendations, but, in the case of passenger steamers coming under survey for the first time on or after 1st July, 1923, the arrangements for ventilating reserve bunkers should comply with paragraph 5 (a) to (c). See paragraph 13.

5. Arrangement and Area of Ventilator Orifices.—Each hold or 'tween deck compartment in which coal is carried should be provided with at least two ventilators, one for inlet and the other for outlet. They should be of about the same size and placed at the opposite ends of the compartment or as far apart as practicable. See paragraph 6 for types of ventilators.

As regards the provision of additional ventilation, the Surveyors cannot at present require any particular arrangement to be adopted, but the following suggestions as to number and area of ventilating orifices are formulated for the sake of uniformity, and no objection need be raised to arrangements which comply with them.

The suggestions apply to new vessels, the keels of which are laid on or after 1st July, 1923.

(a.) Where the breadth of the deck, forming the crown [fol. 692] of the hold or 'tween decks at either end of the space, is 45 ft. or more, measured to the inside of the shell plating, at least two ventilating orifices should be provided at that end of the compartment and they should be suitably disposed to ventilate the "wings" of the space.

(b.) Where the length of the compartment is 80 feet or more, one additional ventilating orifice should be provided near the middle of the compartment, if the breadth of the compartment at the middle is less than 45 feet, and two additional orifices if the breadth is 45 feet or more.

(c.) The aggregate clear area of the ventilating orifices for any hold should not be less than given by the following rule:

$$A = \frac{L \times B}{1000}$$

where A is the aggregate clear area of the openings in square feet;

L is the mean length of the hold in feet at the deck forming its crown; and

B is the breadth in feet of the deck forming the crown of the hold, measured at the middle of the hold to the inside of the shell plating.

The aggregate clear area of the ventilating orifies for any 'tween deck compartment should not be less than given by the following rule

$$A = \frac{L \times B}{1500}$$

the length L and the breadth B being in this case measured at the deck forming the crown of the 'tween decks compartment.

[fol. 693] LIBELLANTS' EXHIBIT 18

(Photoprint)

(Here follows side folio 693-a)

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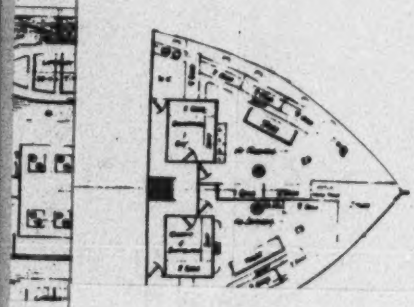
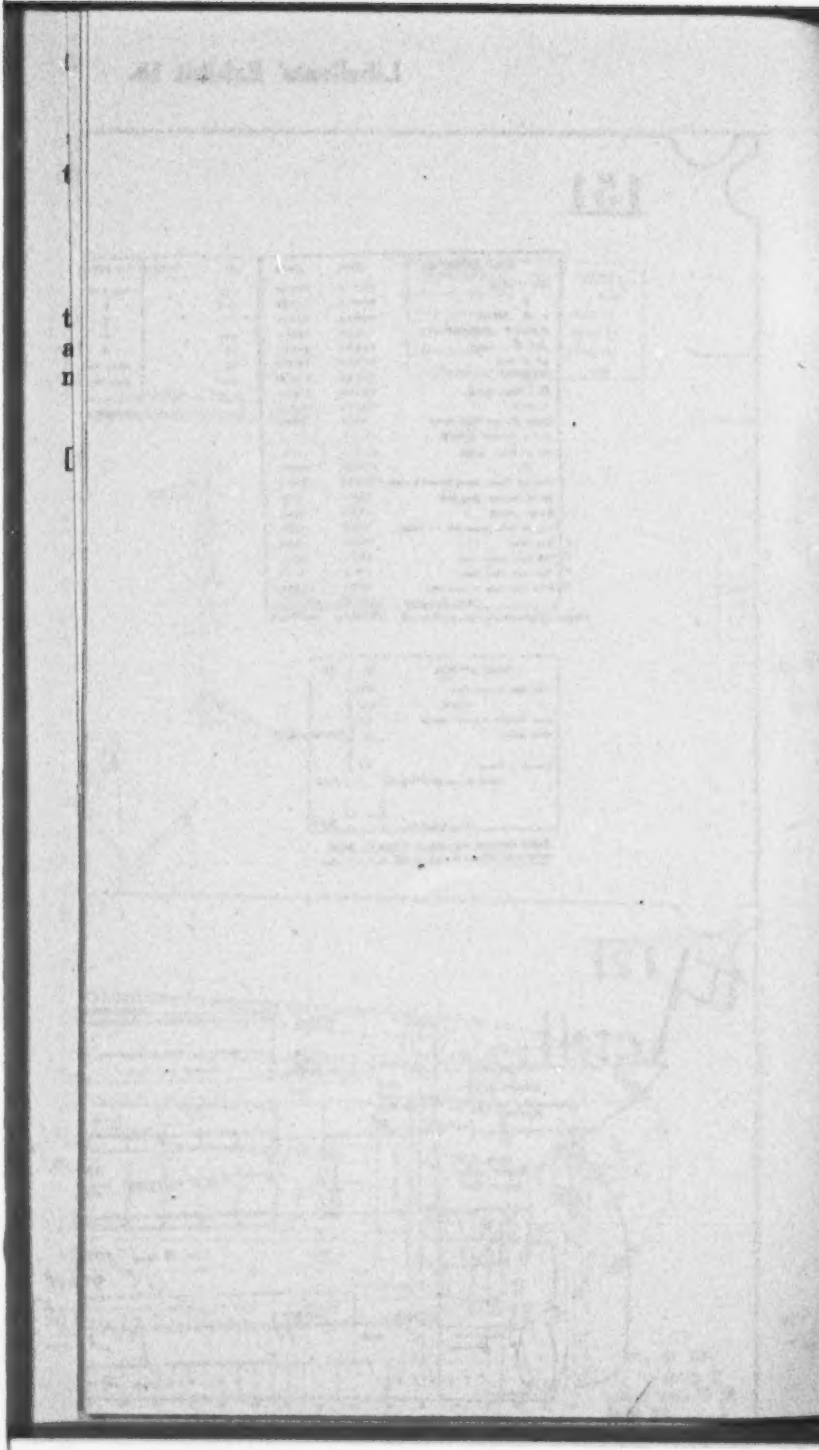
554A

151



— DIAGRAM SCALE —



[fol. 694] LIBELLANTS' EXHIBIT 19

(Omitted pursuant to stipulation)

LIBELLANTS' EXHIBIT 20

UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF NEW YORK

100—34

CUDAHY BROS. Co. et als., Libellants,

against

ELLERMAN'S WILSON LINE, LTD., Owner of S. S. "Galileo", Respondent

96—206

EARLE & STODDART, INC., et als., Libellants,

against

ELLERMAN'S WILSON LINE, LTD., Owner of S. S. "Galileo", Respondent

Stipulation as to Certain Facts

It is hereby stipulated and agreed by and between the [fol. 695] parties hereto that the following facts are true and need not be established by the introduction of evidence:

1. All the libellants are individuals, partnerships or corporations, as alleged in the first paragraph of the libels.

2. The statement in the libels of the merchandise shipped on the S. S. "Galileo" is correct excepting that the following discrepancies should be and are hereby corrected:

Item				
14	5 Boxes	Should be	8 Boxes.
37	6 "	"	" 7 "
83	3 "	"	" 5 "
119	Newcastle	"	" Hull.
120	"	"	" "
153	28 Boxes	"	" 65 Boxes.
180	Newcastle	"	" Hull.
184	186 Boxes	"	" 23 Boxes.

Item		
190	Apparently duplicate of 189.	
191	Newcastle	Should be Hull.
219	500 Boxes	" " 499 Boxes.
230	290 Cases—In excess—apparently duplicated.	

3. All of the merchandise shipped on the S. S. "Galileo" on the voyage mentioned in the libels sustained some damage from fire occurring on board said steamer and/or water resulting from an effort to put out the fire.

4. The parties hereby agree that the trial on the merits may be proceeded with without the necessity of the libellants proving the actual ownership and right to sue in each instance at the trial.

[fol. 696] 5. The following chemical analysis of both Pocahontas and Morrisdale Coal, as taken from the mine vein, is correct. This Morrisdale coal sample was taken from the same vein that produced the coal sold to the "Galileo".

	Fixed carbon	Volatile matter	Moisture	Sulphur	Ash	Oxygen
New River or Pocahontas Coal	74.16	18.15	2.57	1.26	5.12	4.69
Morrisdale Coal	65.6	24.3	2.4	2.1	7.7	5.0

6. All of the coal which was on board the "Galileo" on the voyage mentioned in the libels was run-of-the-mine Morrisdale Coal.

Dated New York City, November 1, 1929.

Bigham, Englar, Jones & Houston, Proctors for Libellants. Kirlin, Campbell, Hickox, Keating & McGrann, Proctors for Respondent.

96
206

Ex. #21
U. S. Dist. Court,
S. D. of N. Y.
NOV 8 '29.

(Ellison)

[fol. 697] LIBELLANTS' EXHIBIT 21

(Photoprint, side folio 697-a)

[fol. 698] LIBELLANTS' EXHIBIT 22

(Photoprint, side folio 698-a)

FOLD OUT IS TOO LARGE TO BE FILMED

Libellants' Exhibit 22.

B RC3 5028

Ellerman's Wilson Line

ELLERMAN'S WILSON LINE, LIMITED, HULL,
OWNERS:

NEW YORK to HULL.

CARRYING GOODS AT THROUGH RATES TO AND FROM
Newcastle-on-Tyne, Lynn, Ipswich, Yarmouth,
Sunday, Aberdeen, Leith, Etc.

26, BROADWAY,
NEW YORK, N.Y.

CHAMBER OF COMMERCE BLDG.,
BOSTON.

FORWARDING CLAUSE:—Applying only if the whole goods are contracted for delivery [illegible].
THE GOODS SPECIFIED IN THIS BILL of LADING are to be forwarded to

[illegible] unless the owner's risk notes where same are required by carrier by which the goods are forwarded. In event of the usual terms of conveyance from Hull to the place of destination, and the delivery of the goods thereat being delayed, recorded, interrupted or rendered impossible, the Steamship Company may in its sole discretion and option, forward the goods to the nearest available place, there to be considered a final delivery, or may retain or warehouse the goods. The charges and expenses consequent thereupon, and any other charges incurred by the Steamship Company in addition to such ordinary expenses of carriage and transhipment shall be paid by the consignee, and the Steamship Company may exercise a lien on the goods until such expenses are paid.

SHIPPERS' MARKS:

R B
9103
HULL

Ex. 224.
U. S. Dist. Court,
S. D. of N. Y.
NOV 11 29

NOTIFY..RUSTON & HORNSBY LTD
EXCAVATOR WORKS
SPIKE ISLAND
LINCOLN

NOTIFICATION CLAUSE. Also on each such [illegible] consignment whatsoever attach to the steamer or her owners, her [illegible] to timely forwarding of arrival of goods.

..... @ ..... per ..... $..... ¢.....
..... Ft. ..... in. @ ..... per c. ft. $.....
..... @ ..... per 2240 lbs. $.....
..... @ ..... per ..... lbs. $.....

Total $.....

RECEIVED

8 EIGHT PIECE

IT IS MUTUALLY

ALL RISK OF FIRE OR FLOOD WHILE GOODS ARE ON THE DOCK TO BE BORNE BY SHIPPERS.

Attention of Shippers is called to Sec. 2(3) of the Criminal Code of the United States (Act of Congress, March 4th, 1909).

N.Y. 24—10,000—6-24—HY

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1-2-10M-10/M-7-26

PAYABLE IN GOLD OR ITS EQUIVALENT

UNITED STATES STEEL PRODUCTS COMPANY

LONDON

T

POST OFFICE ADDRESS: 30 CHURCH STREET, NEW YORK CITY

EXPORTERS OF THE PRODUCTS OF

CARNEGIE STEEL CO.	AMERICAN STEEL & WIRE CO.	AMERICAN SHEET & TIN PLATE CO.	NATIONAL TUBE CO.
ILLINOIS STEEL CO.	AMERICAN BRIDGE CO.	TENNESSEE COAL IRON & R. R. CO.	LORAIN STEEL CO.

ALL INVOICES ARE SUBJECT TO DRAFT OR CASH AGAINST DOCUMENTS, ACCORDING TO ARRANGEMENT.
NO GOODS SOLD OR SHIPMENTS MADE SUBJECT TO ACCEPTANCE OR INSPECTION. AFTER LEAVING THE MAKERS MILLS.
CLEAN BILLS OF LADING CONSTITUTE OUR FINAL DELIVERY AND RELEASE FROM RESPONSIBILITY.
OUR RATES ARE BASED ON INVOICE DATES.

LONDON OFFICE, 36-38 NEW BROAD ST. E.C.

REFER TO [illegible] NO. 112511

NEW YORK, Aug. 20 1926.

SOLD TO RUSTON & HORNSBY LTD., LINCOLN, ENGLAND.

Eu-1 - 190

FOR SHIPMENT FROM PITTSBURGH, PA. TO HULL ENGLAND PER ABOUT

INSURANCE VIA NEW YORK EFFECTED WITH THE SEA INSURANCE CO FOR $ 600.00

PRICES C.I.F-HULL, ENGLAND. TERMS NET CASH SIGHT DRAFT WITH SHIPPING DOCUMENTS ATTACHED ON MESSRS. RUSTON & HORNSBY LTD., LINCOLN, ENGLAND.

MILL NO. U-X-214

OUR ORDER 9103 SALESMAN LONDON-- TL-6384 NO. N. Y. NO. XCS-5028

	PCS		WEIGHT EACH	TOTAL WEIGHT T.	C.	Q.	PRICE PER 2240 LBS. OVERHEAD. £	S	D
		TANK STEEL PLATES							

Libellants' Exhibit 23.

[fol. 699] LIBELLANTS' EXHIBIT 23

(Photoprint, side folio 699-a)

[fol. 700] LIBELLANTS' EXHIBIT 24

(Photoprint, side folio 700-a)

Holds

96/206

1 Gram
2 ✓
3 ✓
4 Acc
5 Gram
6 ✓

Decks

1 Pmen.
2 Yeoman
3 ✓
4 Pmen
5 Boom
6 Pmen.

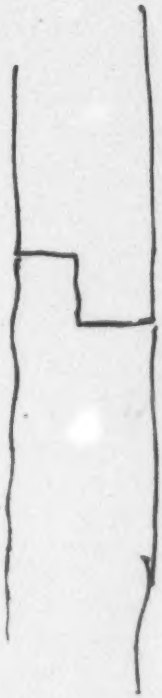
(Hands)

Ex. 424.
U. S. Dist. Court,
S. D. of N. Y.
NOV 21 '29

96/206

Ex. 25
U. S. Dist. Court,
S. D. of N. Y.
NOV 11 '29.

(Hook!)



[fol. 701] LIBELLANTS' EXHIBIT 25

(Photoprint, side folio 701-a)

[fol. 702] LIBELLANTS' EXHIBIT 26

Lloyd's Calendar, 1926

Fires in Bunkers and Coal Cargoes

Risks of Spontaneous Combustion

(Pages 267-269)

A report, made to the Committee of Lloyd's Register, by Mr. J. T. Milton, the Society's Chief Engineer Surveyor, on the subject of spontaneous combustion of coal, was issued in July, 1912. It is noted that during 1911 no fewer than 103 cases were reported in the Shipping Gazette and Lloyd's List of vessels arriving at or being in port with bunkers on fire, and 24 cases of vessels reported with cargoes on fire. The "general conclusions" of the report are as follows:

Through Ventilation.—After a careful consideration of the conclusions arrived at by the Royal Commissioners of 1875, and by Professor Threlfall, and of the experiments conducted by M. Fayol, it is considered that, without any doubt whatever, coal cargoes should not have any through ventilation, the very thorough ventilation suggested by M. Fayol, by dividing up the cargo into numerous separated layers, being quite impracticable. Even if the division could be carried out, there would be great difficulty in arranging such through currents of air as to ensure sufficient circulation through every place where there was an accumulation of small coal and dust to carry away the heat generated by the oxidation caused by the limited air supply.

Hermetically Sealed Holds.—The surface ventilation now [fol. 703] always provided, if the cowls are properly attended to, is a safeguard against the accumulation above the coal of marsh gas or other inflammable gases evolved from the coal, and the consequent risk of explosion; but it is a question whether this ventilation, supplemented as it frequently is by the opening of the hatches in fine weather, does not aid in producing heating of the coal and the risk of spontaneous combustion, by supplying to the body of the coal the limited quantity of air necessary to permit of the slow absorption of oxygen, which is the cause of the heating

of the coals. It would be safer as regards heating if M. Fayol's suggestion of hermetically sealing the holds could be carried out, arranging, however, provision for the escape of the marsh gas evolved during the voyage. If this method could be adopted care would have to be taken to thoroughly ventilate the surface and the vacant spaces in the holds before discharging the cargo. Also as the holds would soon become full of gas in all the interstitial spaces between the pieces of coal, special attention would have to be given to prevent leakage of dangerous gas through sounding pipes, bilge and deck pump suction pipes, &c. The care necessary, however, would not be greater than that habitually given to such matters in the cases of vessels carrying petroleum in bulk.

Pyrites and Wet Coal.—From the report by Professor Threlfall, supplemented by the experiments of M. Fayol, it [fol. 704] appears that the presence of pyrites in the coal has not the prejudicial effect which the Royal Commissioners of 1875 supposed, and it is also clear from both these sources that wet or damp coal is not in any way more dangerous to carry than coal which is perfectly dry.

Bunker Risks.—Concerning bunkers, the conditions regarding which are so different from those applying to holds, and in which, while they are being worked, it is necessary to have an ample ventilation throughout, it is desirable that the engineers of the vessels should realise the conditions tending to over-heating and combustion, so that in each particular case they may take such precautions as may be possible. Amongst other points they should understand—

1. That all coal gives off some inflammable gas when freshly worked, and also when freshly broken, and that this gas becomes explosive when mixed with certain proportions of air. It is the evolution of this gas which requires the ventilation of the bunkers before entering them with naked lights.

2. That heating of coal and the consequent risk of spontaneous combustion does not proceed from the presence of gas, but is caused by the absorption of oxygen from the air.

3. That this absorption, and the accompanying development of heat, is greater at high than at low temperatures,

so that when once commenced it proceeds at an increasing rate if the supply of air is maintained.

[fol. 705] 4. That where heat is being generated by the absorption of oxygen, it is probable that more gas will be evolved. The evolution of the gas, however, does not cause the generation of heat. Where such gas is being evolved, if sufficient supply of air is maintained to provide more oxygen than is being absorbed, an explosive mixture is formed amongst the coals.

5. To minimise the absorption of oxygen by the coal in reserve bunkers, or in any bunker in which men are not actually working, the lower doors should be kept absolutely closed, so as to prevent any current of air whatever passing through the bunker and into the mass of coals.

6. If there are any parts of bunkers in which, owing to the proximity of boilers, uptakes, or recesses through which steam pipes, &c., are carried, there is likely to be a higher than normal temperature, these parts should, if possible, be stowed with large coal, and should be worked out as soon as possible. The shoots should be arranged not to deliver small coal into these places.

7. Small coal which accumulates under shoots, &c., should be worked out as soon as possible, and not left till the last.

8. If any coal is left in a bunker when a fresh charge has to be taken in, it should be trimmed into a position to insure its being used on the next voyage. It cannot be too strongly impressed upon those responsible that danger of over-[fol. 706] heating and spontaneous combustion increases with the length of time the coal remains in the ship.

9. Where bunkers are over gutterways, &c., special care should be taken that the limbers are tight. Several fires have originated in bunkers just over the limbers, and there is reason to suppose that they have been caused by air circulating through the coal and coming from the limbers.

10. There is no risk entailed by the coal being wet when put on board. In fact, in cases where coal is known to be of a fiery nature, it would be of an advantage for the small coal to be damped when charging the bunkers.

11. If heating of any part should occur where there is no traceable external source of heat to account for it, the heat-

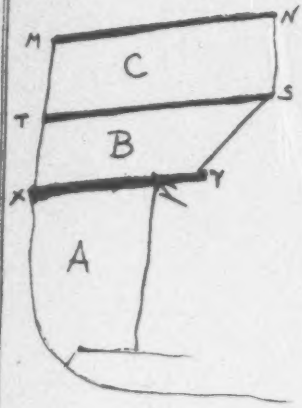
ing will probably be local only in a part where the coal is small, and the surrounding portions may not be overheated. In attempting to obtain access to the heated parts for the purpose of applying water, special care is needed to prevent the action taken from supplying the air which is needed to convert a heated zone into an actual fire.

12. Although some kinds of coal have proved to be more liable to spontaneous heating and combustion than others, it should be realized that all coal, even anthracite, is liable to these occurrences.

[fol. 707] LIBELLANTS' EXHIBIT 27

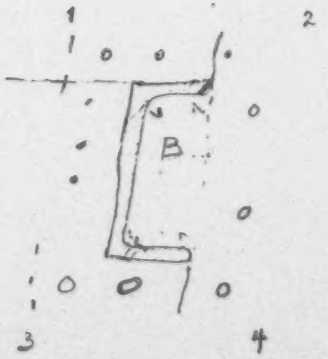
(Photoprint, side folio 707-a)

96
206



Ex. #27
U. S. Dist. Court,
S. D. of N. Y.
NOV 13 '29.

(Laurie)



[fol. 708] LIBELLANTS' EXHIBIT 28

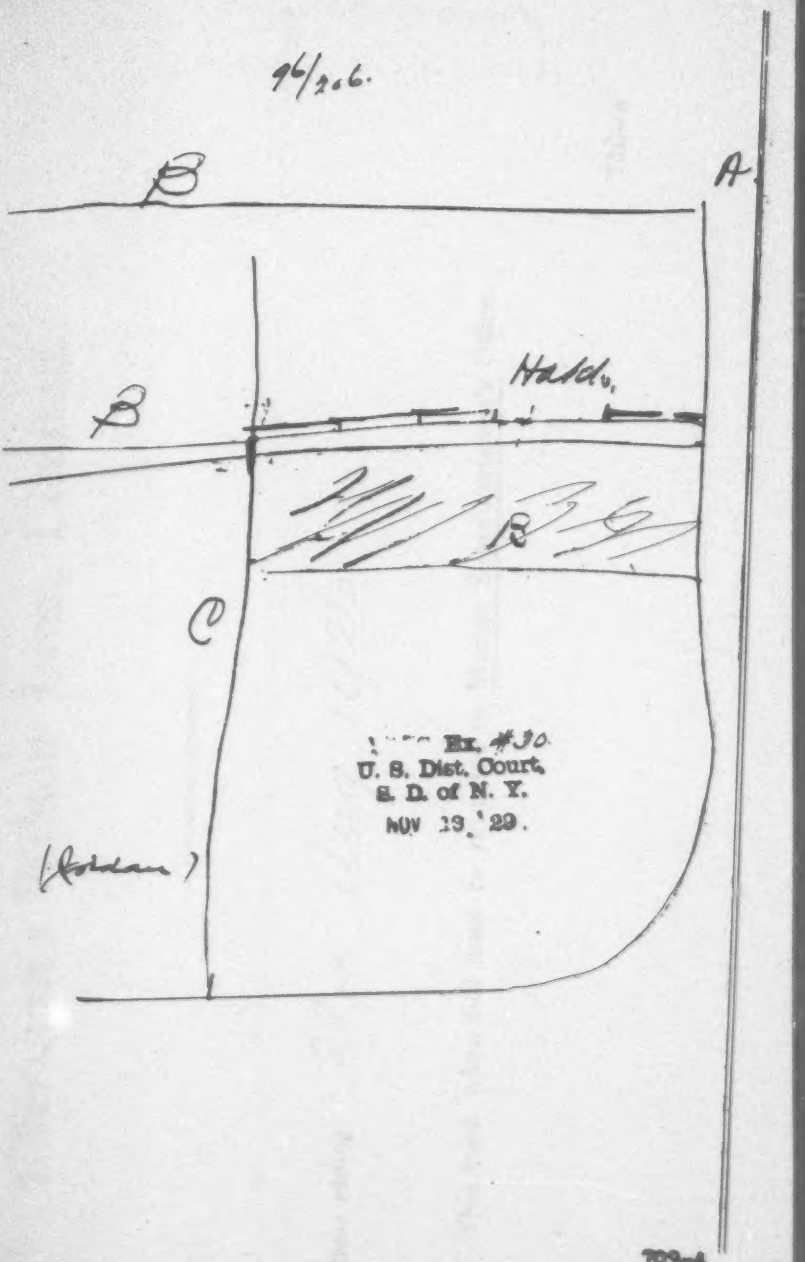
(Omitted pursuant to stipulation)

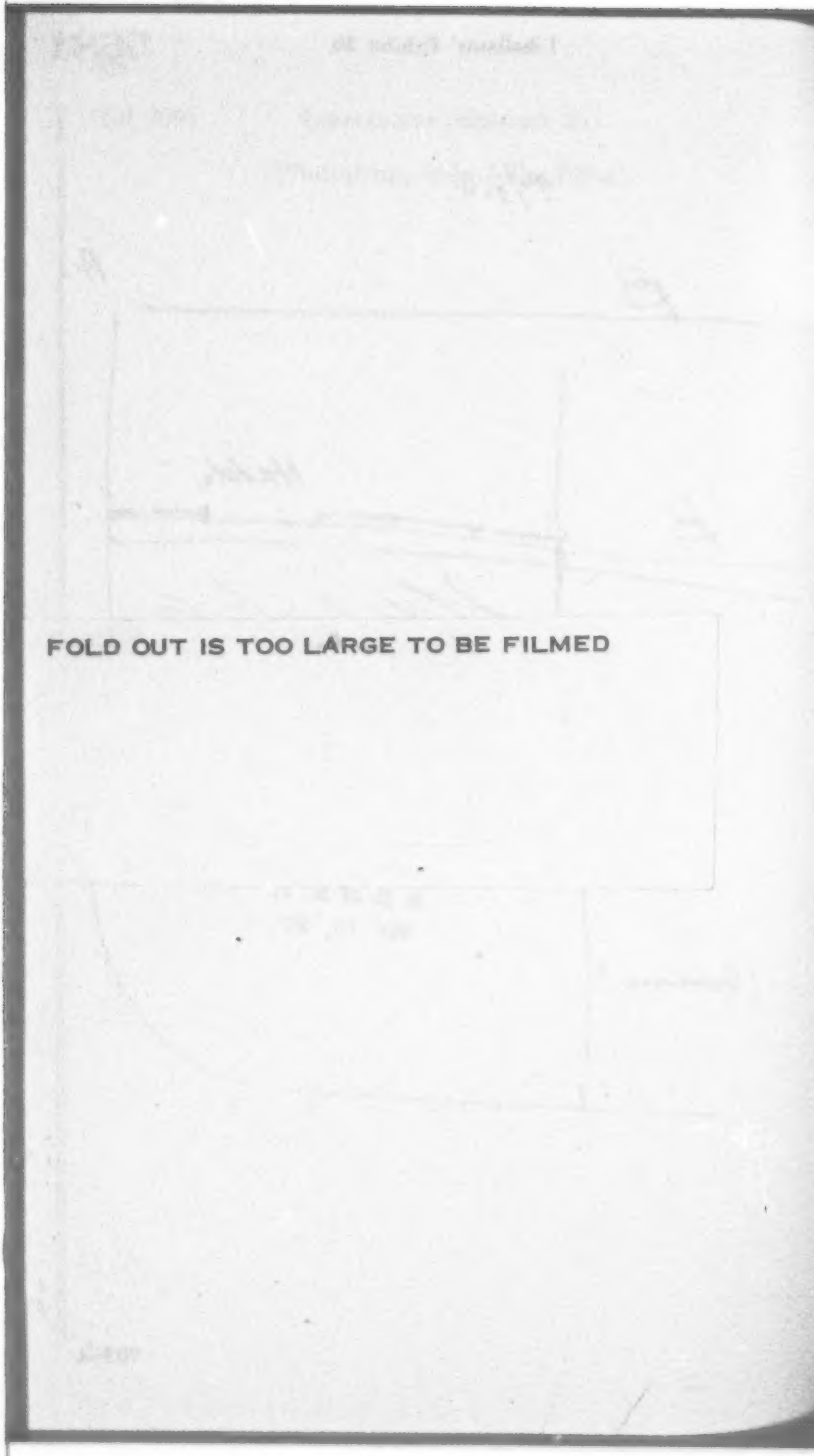
LIBELLANTS' EXHIBIT 29

(Printed herein at page 724 as Respondent's Exhibit 29)

[fol. 709] LIBELLANTS' EXHIBIT 30

(Photoprint, side folio 709-a)


96/206.
B
A
B
Hold
B
C
Ex. #30
U. S. Dist. Court
S. D. of N. Y.
NOV 19 '29.
(Holden)



FOLD OUT IS TOO LARGE TO BE FILMED

Ellerman's Wilson Line, Limited.

Respondent's Exhibit A.

Mate's Log Book

Containing

A Record of the Proceedings on board the

S.S. "Galileo"

Commanded by C. Barron

FOLD OUT IS TOO LARGE TO BE FILMED

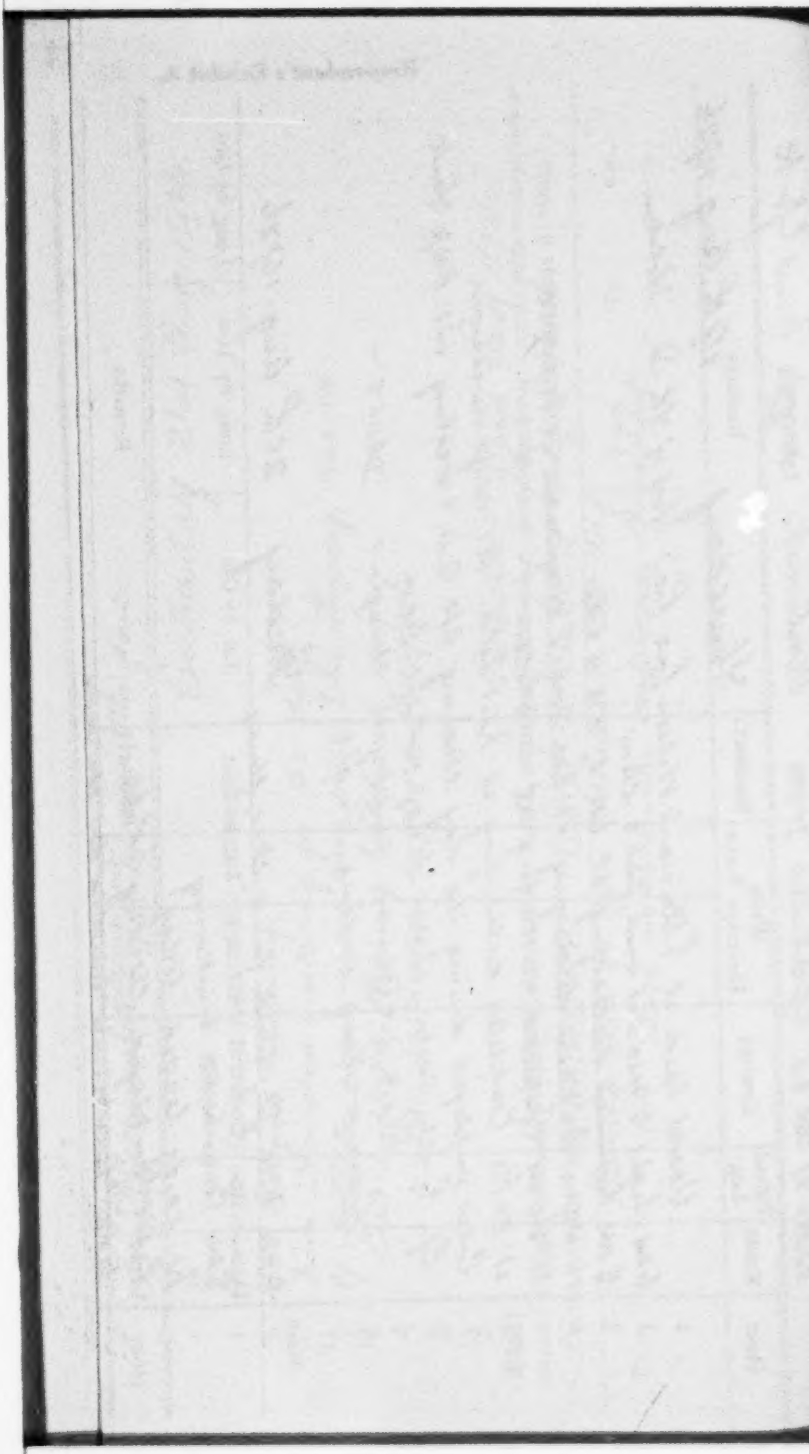
LOG of the s.s. "Galileo" from Antwerp towards New York.

Hour	Knots	Patent Log	Courses	Wind Direction	Wind Force	Barometer	Remarks
							Thursday 19th Aug 1926.
1			Vessel laid at Ellerman's Wilson Line Pier, Foot of 4th St., Hoboken.				
2	6 AM.		Light to mod. SE wind, fine & clear.				
3	8 AM.		Resumed discharging at hos. 1, 2 & 5 holds.				
4	10:45 AM.		Completed discharging at hos. 2 & 5 & commenced at ho. 6 hold.				
5	11:40 AM.		Completed discharging at ho 6 hold.				
6	12:30 PM.		Completed discharging at ho 1 hold. all cargo discharged.				
7			Crew employed during the day cleaning aft C.D. & washing out Deep Tank.				
8			G. Gill, Sailor, absent today without leave				
9			Shore watchman employed throughout DRAFT:-				
10			Crew working overtime tonight.				
11							
Noon							Friday 20th Aug 1926.
	6 AM. Mod. SE wind fine & clear, cloudy						

Distance Run	Corrected	Variation	Lat. by Acct.	Lat. by Obs.	Long. by Acct.	Long. by Obs.
8 AM. Commenced hatchening the cargo loaded today						

Hour	Knots	Patent Log	Courses	Wind Direction	Wind Force	Barometer	Remarks
1			5 PM. Hatchening finished for the day Shore watchman employed throughout				

Respondent's Exhibit A.



[fol. 710] RESPONDENT'S EXHIBIT A

(Part Photoprinted, side folios 710-a and 710-b)

[fol. 711] RESPONDENT'S EXHIBIT B

(Photoprint, side folios 711a, b, c, d, e, and f)

FOLD OUT IS TOO LARGE TO BE FILMED

Ellerman's Wilson Line, Limited.

Respondent

Date ending _____

This book when full must be returned to Marine Superintendent's Office.

711-A

2-A

FOLD OUT IS TOO LARGE TO BE FILMED

LOG of the s.s. "Galileo" from Antwerp AT towards New York.

Hour	Knots	Patent Log	Courses	WIND Direction	WIND Force	Barometr	Monday	Remarks 23rd. Aug. 1926.
"	Light E'ly wind, dull & ocast, continuous rain.						"	"
"	" Crew variously employed during the day.						"	"
"	" Shore watchman employed throughout.						"	"
"	" Watson, Sailor, absent without leave today, deserted						"	Noon
"	"						"	p.m.
"	"						"	"
"	"						"	"
"	"						"	"
"	"						"	"
"	"						"	Midnight

711-B

5208

P-4

FOLD OUT IS TOO LARGE TO BE FILMED

LOG of the s.s. "Falaba" from Antwerp AT towards New York.

Hour	Knots	Patent Log	Courses	WIND Direction	WIND Force	Barometr	Remarks
						Thursday	26th. Aug. 1926.
1	Vessel	laid	alongside	Ellerman's	Wilson	Line	Pier, foot of 4th St, Hoboken.
"	"						
"	"						
"	"					

FOLD OUT IS TOO LARGE TO BE FILMED

LOG of the s.s. Galilee from New York. towards Hull.

Hour	Knots	Patent Log	Courses	Wind Direction	Wind Force	Barometer	Remarks Saturday 28th. Aug 1926.
1		Vessel	laid alongside	Ellerman's Wilson Line Pier,			Hoboken.
2		6 AM.	Light NW wind, fine & clear.				
3		8 AM.	Resumed loading at No. 2 hold				CARGO.
4		9.15	Completed loading			30.5.	DRAFT. F. 26' 0" A 26' 8" 4/4/3 Newcastle
"		"					" " "
"		"					" " "
"		"					" " "
"		"					" Sunset "
" 10		" Noon.				J. McKee	" " Noon
" Noon		" 2 PM	R. Turner			J. Colledge	" " to p.m.
" 2 PM		" 4 "	"			W. Casey	" " "
" 4 "		" 6 "	T. Ellison.			A. Farrow	" Sunrise
" 6 "		" 8 "	"	W Casey		J. Maguire	" " "
" 8 "		" 10 "	S. Butcher			A. Farrow	" " "
" 10 "		" Midt.	"				" " Midnight

711-D

2-A

FOLD OUT IS TOO LARGE TO BE FILMED

LOG of the s.s. "Galileo" from New York towards Hull.

	Patent	Course	Wind	Remarks
"	"			
"	"			
"	"			
"	"			
"	"			
"	"			
"	"			
"	"			
"	"			
"	"			

AFT. " 40 feet. " to Sea. "
" " "
" " Noon
" " p.m.
" " "
" " "
" " "
" " "
" " Midnight

711-E

570E

2-A

FOLD OUT IS TOO LARGE TO BE FILMED

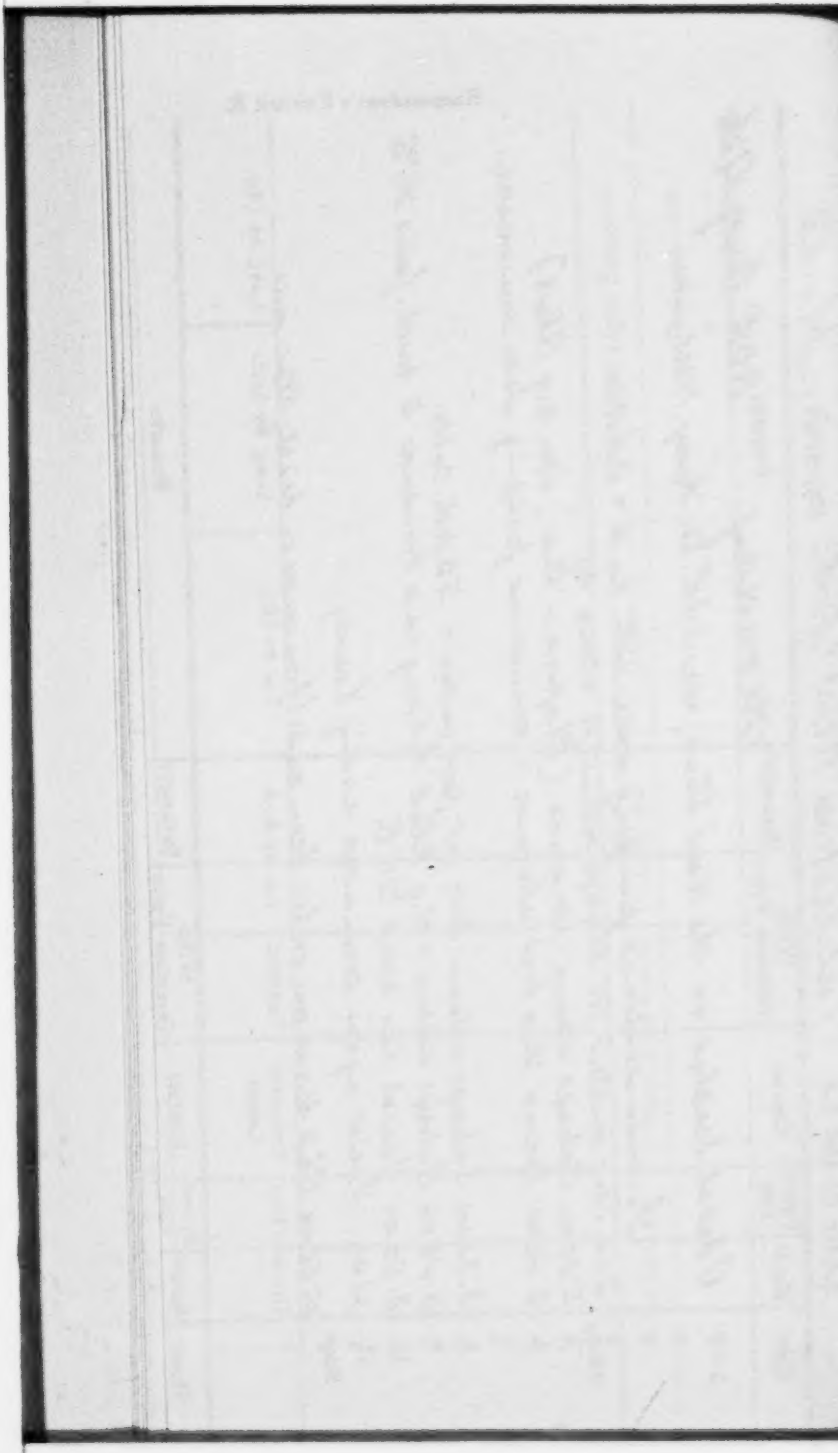
LOG of the s.s. Galileo **from.** New York **towards** Hull.

Hour	Knots	Patent Log	Courses	WIND Direction	WIND Force	Baromet'r	Monday	Remarks	30th. Aug 1926.
"	"							"	"
"	"							"	"
"	"							"	"
"	"							"	Noon
"	"							"	p.m.
"	"							"	"
"	"							"	"
"	"							"	"
"	"							"	"
"	"							"	Midnight

711-F

5701

2-A



COMMERCIAL CABLES

IN CONNECTION WITH POSTAL TELEGRAPH

CLARENCE H. MACKAY, PRESIDENT

RECEIVED AT
20 BROAD STREET
TEL. HANOVER 1120

STANDARD TIME

23 10 19 AM 26

DXDW YP58

HULIA~

LCO WILSONLYKE NY

BUNKER GALILEO ROUND VOYAGE

JUN 23 1926

Ex. C
U. S. Dist. Court,
S. D. of N. Y.
NOV 8 '29.

712-A

Respondent's Exhibit C.

570G

[fol. 712] RESPONDENT'S EXHIBIT C

(Photoprint, side folio 712-a)

[fol. 713] RESPONDENT'S EXHIBIT D

(Photoprint, side folio 713-a)

COMMERCIAL CABLES

IN CONNECTION WITH POSTAL TELEGRAPH

RECEIVED AT
20 BROAD STREET
TEL. HANOVER 1140

CLARENCE H. MACKAY, PRESIDENT.

538

GU RA YP28
HULL 9
LCO WILSONLYN NY

AUG 20 1926

GALILEO LOAD EIGHTFIFTY BUNKERS TRANSFERENCE FRANCISCO

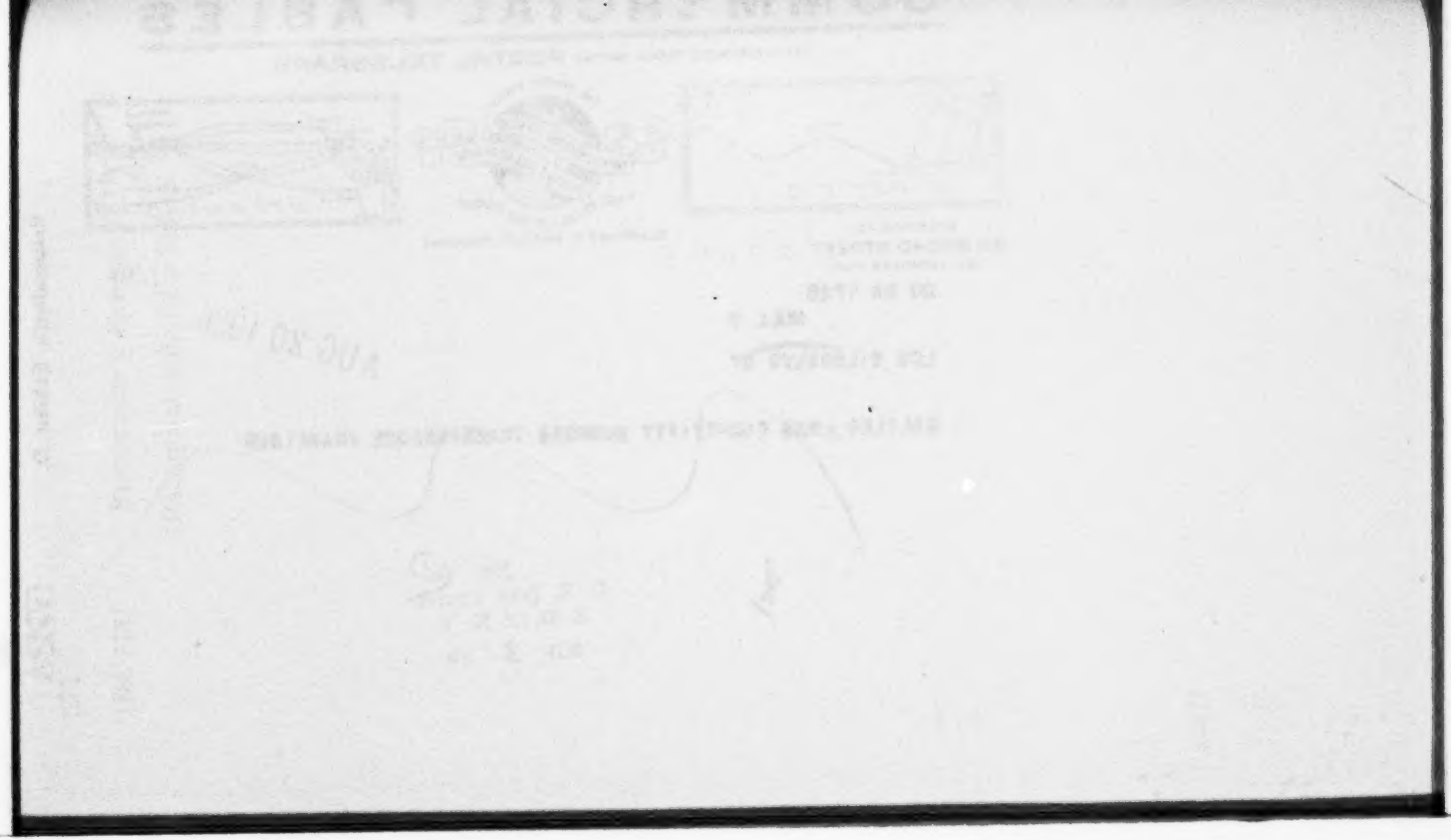
Ex.
U. S. Dist. Court
S. D. of N. Y.
NOV. 8 '29

169

713-A

Respondent's Exhibit D.

5724



MEMORANDUM.

FROM

ELLERMAN'S WILSON LINE NEW YORK, Inc.

PIER, FOOT OF 7TH STREET, HOBOKEN, N.J

N.Y 100—8,000—10/24—E.V.

To GALILEO

July - 26 1926

96/206 Coal on hand on arrival 594-16.
Coal loaded on board 1275-0.
Coal shifted to bunkers Nil.
Coal remained 59-0.
Coal on board leaving Ly. 1810-16.

Ex. "E"
U. S. Dist. Court
S. D. of N. Y.
NOV 11 - 29.

J. L. Oxleby. Chief Engineer

714-A

Respondent's Exhibit E.

5728

[fol. 714] RESPONDENT'S EXHIBIT E

(Photoprint, side folio 714-a)

[fol. 715] RESPONDENT'S EXHIBIT F

(Photoprint, side folio 715-a)

MEMORANDUM.

FROM

ELLERMAN'S WILSON LINE NEW YORK, Inc.

PIER, FOOT OF 7TH STREET, HOBOKEN, N.J

N.Y 100—5,000—10/24—S.W.

To GALILEO

Barge 107

AUG 28 1926. 192

	Tons.
Coal on board on arrival	430
Coal loaded on board	1332
Coal shifted to bunkers	Nil
Coal consumed	54.
Coal on board leaving Lig	1405.

96/206

J. L. Oxtoby. Chief Engineer

Ex. F
U. S. Dist. Court,
S. D. of N. Y.
NOV 11 '29.

715-A

Respondent's Exhibit F.

3748

Respondent's Exhibit G.

5748

TELEPHONE CENTRAL 2180 (20 LINES) CODES SCOTT'S, WATKINS & A.B.C. TELEGRAMS "WILSONS HULL"

ELLERMAN'S WILSON LINE, LIMITED.

Steamship Owners, Underwriters, Warehousemen,
Lighter Owners, Forwarding, Steamship
and Bunkering Agents,
Hull.

October, 1925.

IN YOUR REPLY PLEASE QUOTE THIS REFERENCE

ENGINEERING DEPT.

96/226

Chief Engineer,

S.S. _____

Ex. 4
U. S. Dist. Court,
S. D. of N. Y.
NOV '29.

Dear Sir,

Will you please note all Bunker Coal must be worked out of every bunker consecutively so that no coal will be left in the bunkers any length of time. Also as each bunker is emptied it must be swept down, and all small coal and dross removed and burnt.

Your attention is particularly drawn to this matter on account of recurring fires taking place in the Bunkers on various steamers, due to the fact that coal has been left too long in the bunkers, and has fired by spontaneous combustion.

At the end of this year, and each succeeding year, please send in a statement as to the longest time that any coal has been on board at the time of writing. also the amount.

Yours truly,

W. P. BRACKENBURY.

Superintending Engineer

716-A

[fol. 716] RESPONDENT'S EXHIBIT G

(Photoprint, side folio 716-a)

[fol. 717] RESPONDENT'S EXHIBIT H

(Omitted pursuant to stipulation)

[fol. 718] RESPONDENT'S EXHIBIT I

(Photoprint, side folio 718-a)

FOLD OUT IS TOO LARGE TO BE FILMED

Ellerman's Wilson Line of Steamers

Water taken from Pier through Meter 8700 c. ft.

Number of Passengers

Amount of Passage Money

Cause of Night Work on Inward Cargo To Dispatch Steamer

Cause of Night Work on Outward Cargo

Cause of Night Work Coaling

Remarks

Ellerman Wilson Line Ltd
Hull

Ex. "J"
U. S. Dist. Court,
S. D. of N. Y.
NOV 11 "29.

Agents

718-A

576A

FOLD OUT IS TOO LARGE TO BE FILMED

Water taken from Pier through Meter 8000 c. ft.

Number of Passengers

Amount of Passage Money

Cause of Night Work on Inward Cargo

Cause of Night Work on Outward Cargo } To Despatch Steamer

Cause of Night Work Coaling

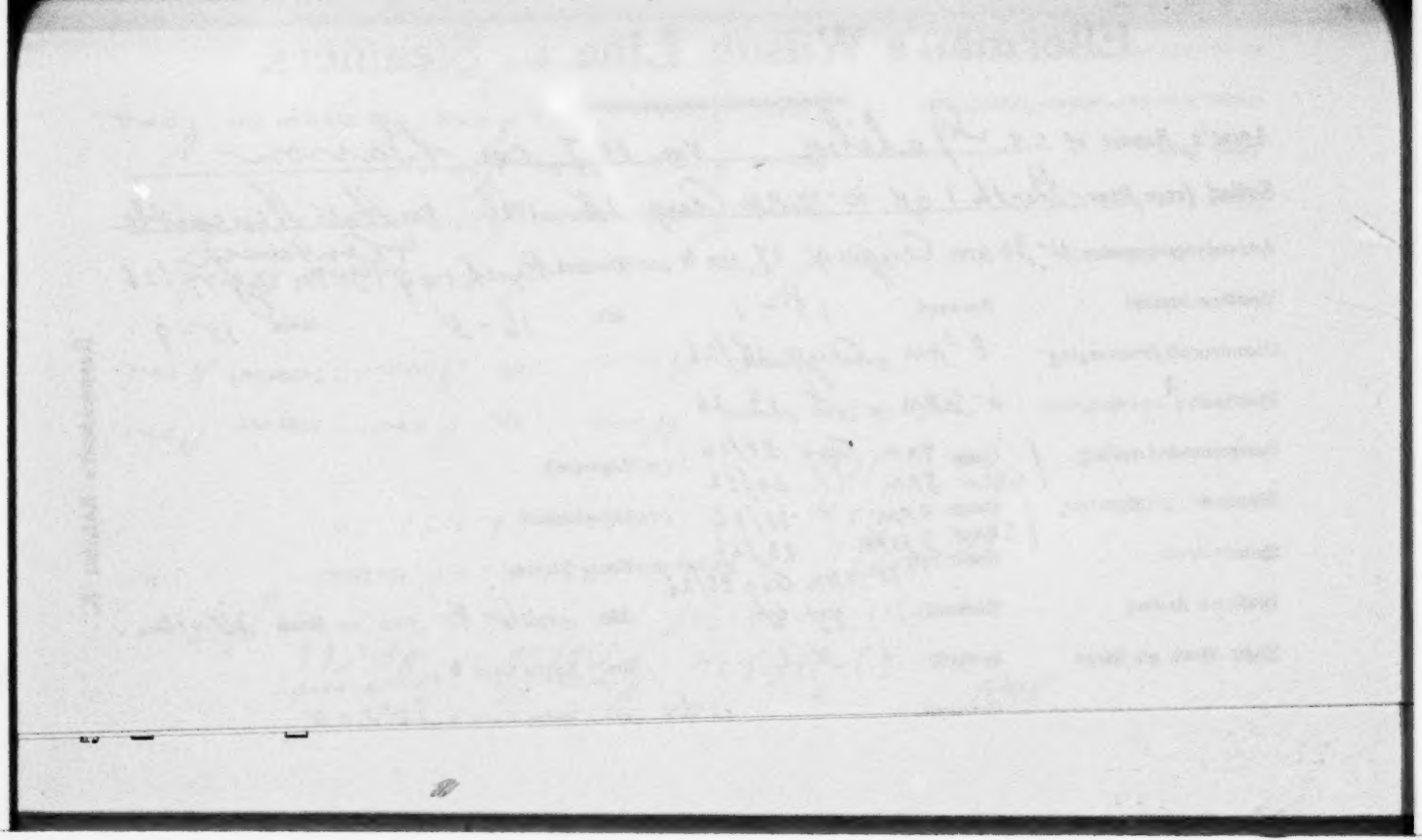
Remarks Allerman Welson Line Ltd
Hull

Exhibit 'K'
U. S. Dist. Court,
S. D. of N. Y.
NOV 11 '29.

Agents

720-A

5763



[fol. 719] RESPONDENT'S EXHIBIT J

(Omitted pursuant to stipulation)

[fol. 720] RESPONDENT'S EXHIBIT K

(Photoprint, side folio 720-a)

[fol. 721] RESPONDENT'S EXHIBIT L

(Omitted pursuant to stipulation)

[fol. 722] RESPONDENT'S EXHIBIT M

(Photoprint, side folio 722-a)

No. 254

CERTIFICATE OF LOADING
BUREAU OF INSPECTION
—OF—
The Board of Underwriters of New York.

96/206

New York, August 28, 1926.

This is to Certify. That the British S/S "GALILEO" whereof Barron is Master, of 4,091 Tons Measurement, built at Newcastle in 1908, bound for Hull has been under this inspection at this port during loading, and has conformed to all the Rules of The Board of Underwriters of New York in relation thereto.

GRAIN HOLDS INSPECTED AND PASSED AS PER PASSES

PARTICULARS OF CARGO LADEN.

Cargo consists of 144,217 bushels wheat in bulk, balance general cargo.
(86 cases gun powder to be loaded in Bay)

Ex. "24"
U. S. Dist. Court,
S. D. of N. Y.
NOV 14 '29

Total 144,217 Bush., equal to 3,863 Tons.

Draft of water loaded, 25 ft. -- in. forward, 26 ft. 8 in. aft. Freeboard, 13 ft. 7 in.

MEAN DRAFT 25 ft. 10 in.

H. A. Hyde Surveyor.

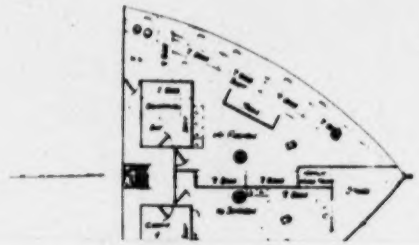
This Certificate is issued on the conditions that while the officers and Committees of the Board use their endeavors to insure that the functions of the Board are properly executed, neither such officers nor such Committees, nor the Board are under any circumstances whatever to be held responsible for any inaccuracy in any report or certificate issued by the Board or its surveyors, or for any error of judgment, default, or negligence of its surveyors or other employees or representatives of the Board.

722-A

Respondent's Exhibit M.

5784

151



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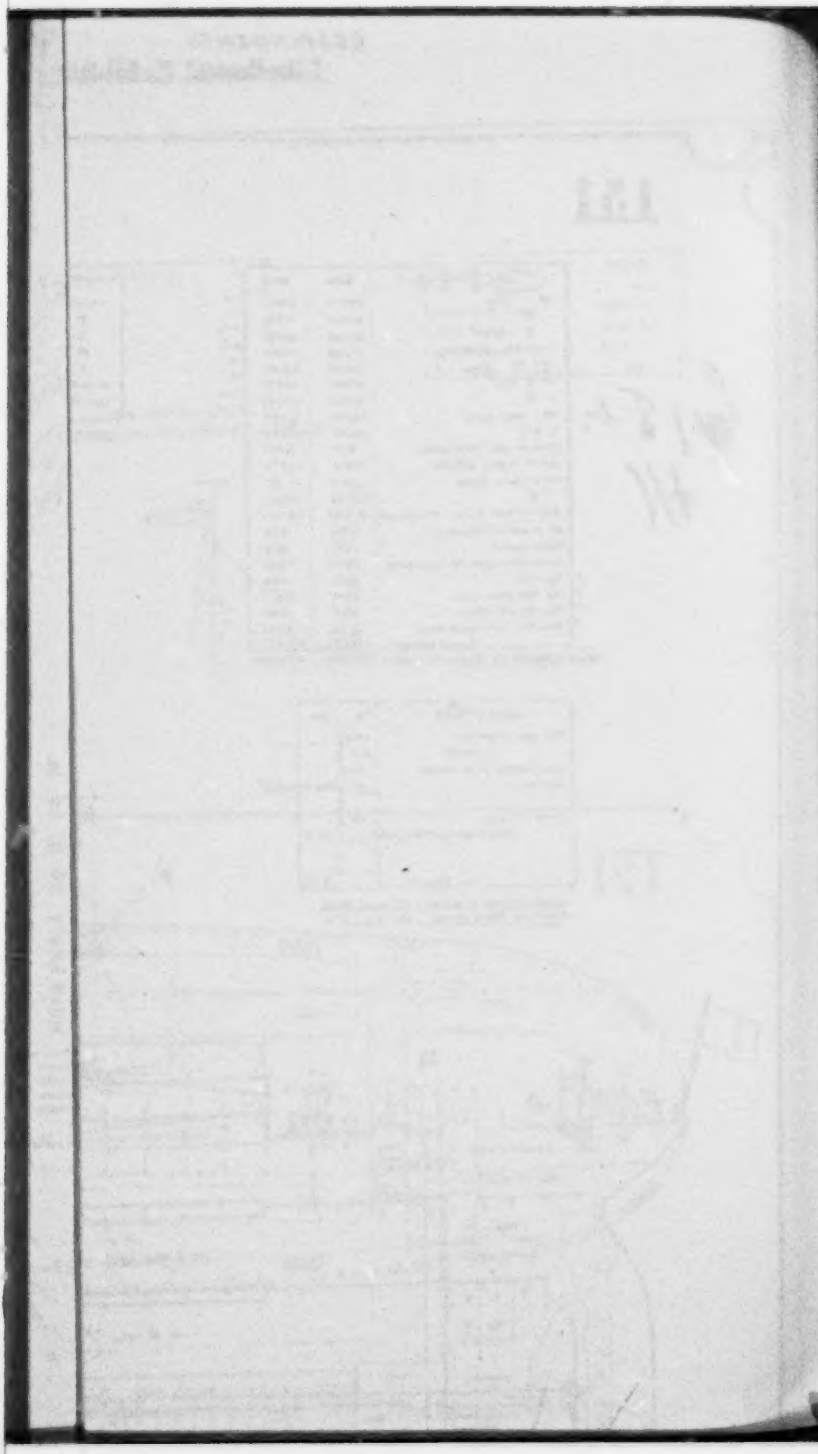

[fol. 723] RESPONDENT'S EXHIBIT 18-B

(Photoprint, side folio 723-a)

[fol. 724] RESPONDENT'S EXHIBIT 29

(Photoprint, side folios 724-a, b, and c)

FOLD OUT IS TOO LARGE TO BE FILMED

...gines and Boilers, Repairs, &c,
...ome and Abroad.

...parts of the Engines or Boilers, please give below a short ...e found, and what was done to them and whether requiring ...eviations, G for good, M for middling, B for bad.

...e Engineer should submit a report of repairs necessary for ...en up such parts of the machinery as will require attention. ...irs are needed, a Supplementary indent must be submitted. ...nstructions for repairs to be done without having first obtained ...ons nor repairs, other than the making good of damage ...done in a foreign port.

...epairs and overhauling of Engines and Boilers as they are ... repairs are being done, they should exercise an intelligent ... and when possible, see all closed up and try the Engines ... sailing. Before sailing, the Chief Engineer should report ...'s office, and give a complete account of repairs done, and ... any repairs done abroad should be forwarded to Engineer's

...nselves that the time notes and other documents, such as ..., or coals, &c., are correct before they sign them ; and any ...e, so that the matter may be enquired into before the ship

...side, note opposite days when lying in port particulars of

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on of Boilers and Machinery.

Homeward

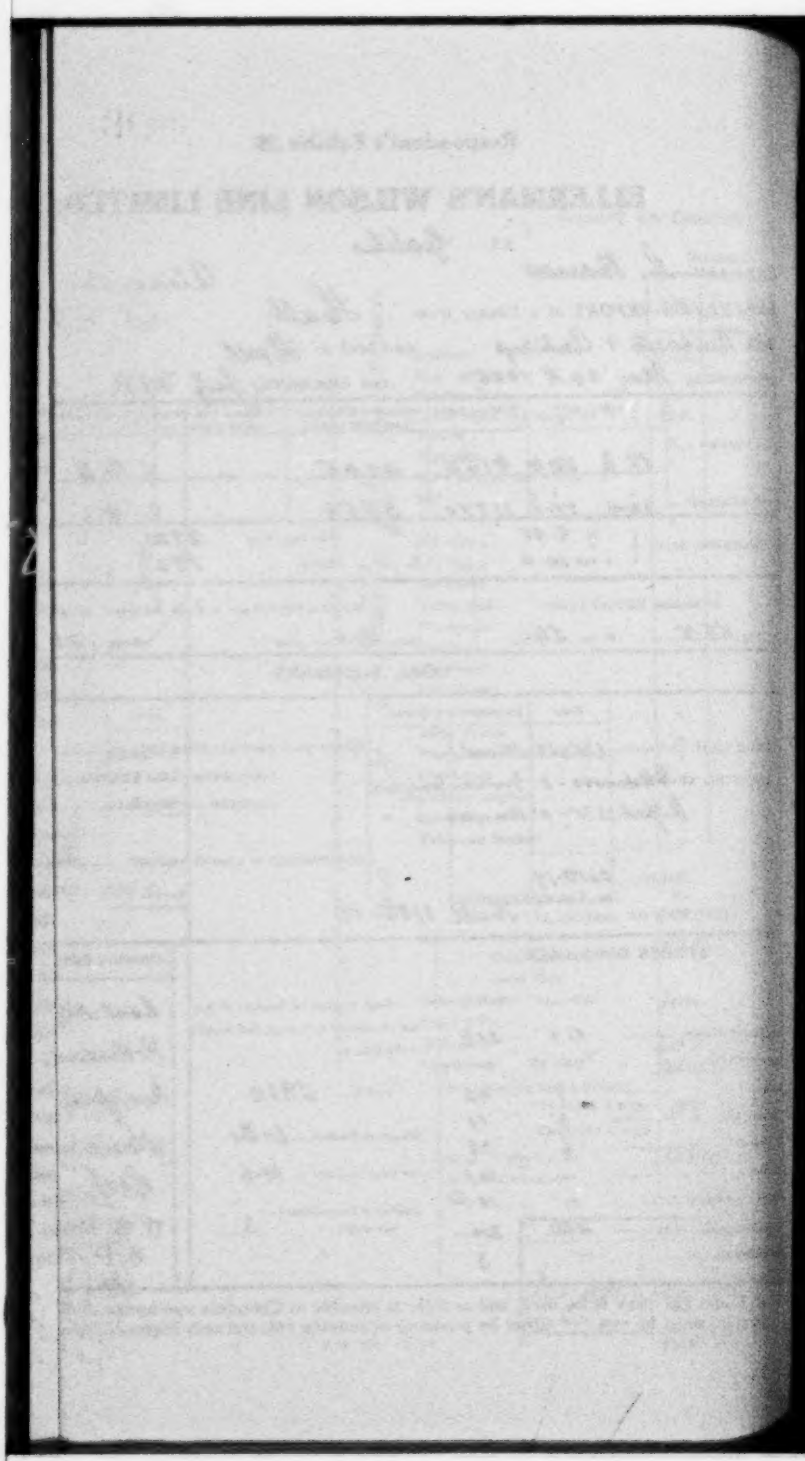
Condition	How Worked	When last Examined	Condition	Whether now reported Examination or not	REMARKS
Good	Well		good		
—	—		—		
Good	Well		Good		
				Yes	Steering Gear.

OUTWARD Tons	Cwts.	Hrs.	HOMEWARD Tons	Cwts.
650	12	377.35	604	8
		7.9	9	17
		02		1
16	0	Over	8	0
19	9	8.9	2	13
26	10	3.8		15
712	11		629	14
19	12			
		125	49	4
4	18	29	5	1
781	1		683	19

lers last cleaned.

Centre	

724-B



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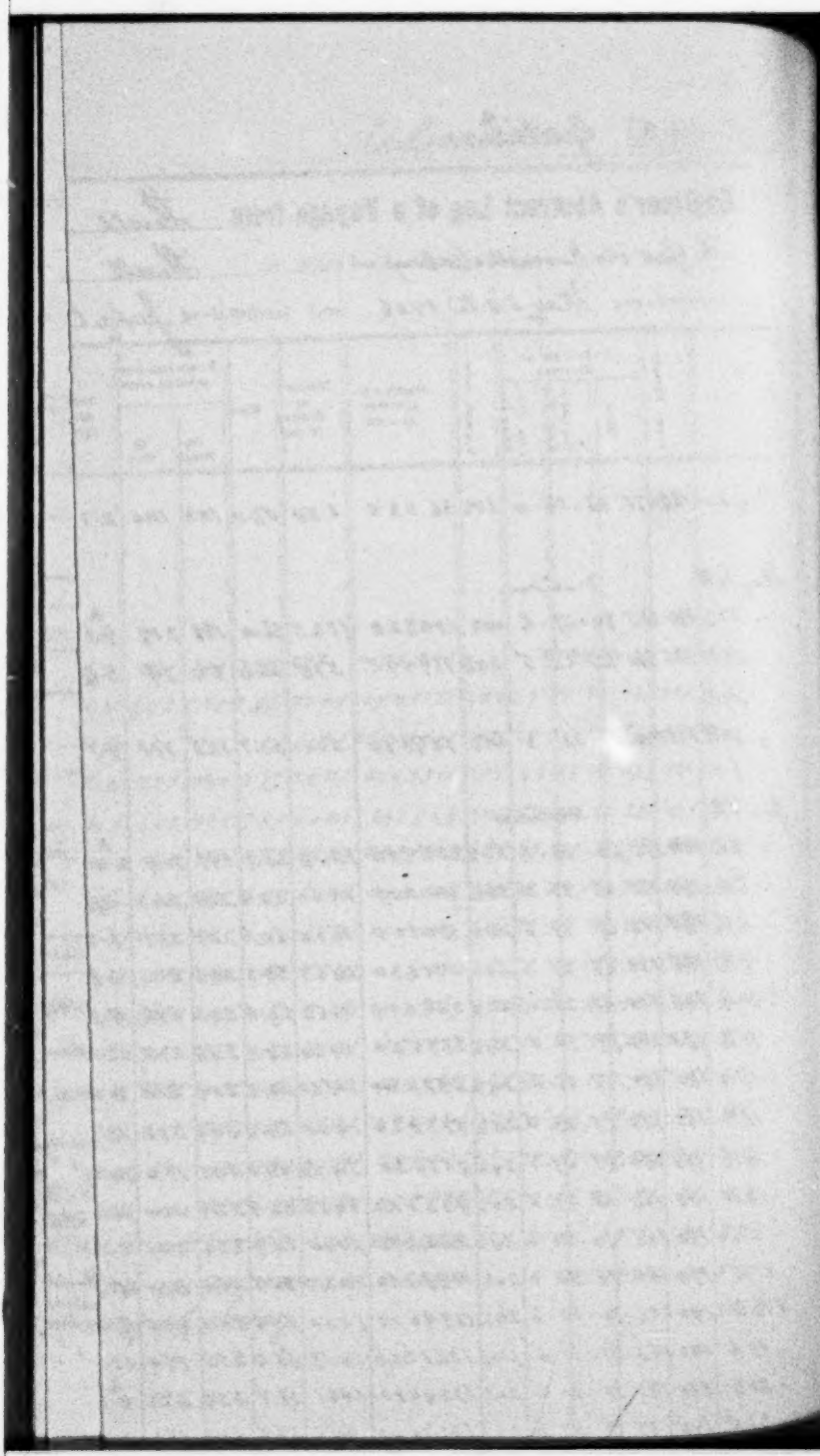


[fol. 725] In United States District Court

[Title omitted]

Stipulation as to Notice of Claim

It is hereby stipulated and agreed between the parties hereto, that the libellants may prove at a later stage in these proceedings such notices of claim they may have given as may be in compliance with various provisions contained in the bills of lading on which suits are brought, and that libellants shall in no way be precluded from offering such proof before a Commissioner if the Court shall find for the libellants on the other issues in the case.

In witness whereof proctors for the respective parties have hereunto set their names this 28th day of March, 1930.

Bigham, Englar, Jones & Houston, Proctors for Libellants, by T. Catesby Jones. Kirlin, Campbell, Hickox, Keating & McGrann, Proctors for Respondent, by Cletus Keating.

[fol. 726] In United States District Court, Southern District of New York

A 96—206

Earle & Stoddart, Inc., et als., Libellants,

against

Ellerman's Wilson Line Limited, Respondent

In Admiralty. Suit in personam against steamship carrier for loss of cargo caused by burning and sinking of vessel.

Appearances:

Bigham, Englar, Jones & Houston (T. Catesby Jones, James W. Ryan, of Counsel) Proctors for Libellants.

Kirlin, Campbell, Hickox, Keating & McGrann (Cletus Keating, L. de Grove Potter, James H. Herbert, of Counsel) Proctors for Respondent.

MEMORANDUM

F. J. COLEMAN, J.:

Libellants were the various owners of a general cargo shipped under various bills of lading on the steamer "Galileo" which was owned and operated by the respondent. The boat left New York at about 10:30 A. M. on August 28, 1926, bound for Hull, England, and about six [fol. 727] hours later, when she was off Fire Island it was discovered that the coal in a temporary bunker was afire through spontaneous combustion. She returned to New York where partly as the result of shifting the coal and of pumping water into her, she sank two days later and became a total loss. Practically the entire cargo was lost and libellants sue to recover its value on the theory of breach of contract of carriage.

There is no charge of fault in the conduct of anyone after the discovery of the fire nor even after the departure of the ship from New York. Unquestionably, the immediate cause of the fire was the gross negligence of the ship's chief engineer in putting a new supply of coal on top of old coal that had become heated in the temporary bunker. The libellants contend that not only was the ship not seaworthy when she commenced the voyage, but that respondent had not exercised due care to make her so, and that therefore the respondent is liable for the loss of the cargo; while the respondent relies on the defense of the Fire Statute (U. S. C. A., Title 46, Sects. 182, 187).

The "Galileo" was a steel general cargo steamer, shelter deck type, of 6,300 tons gross, regularly employed between New York and her home port in Hull, England. She was properly manned, equipped and supplied and was rated in Lloyds Register in Class A1. The only charge of unseaworthiness made by libellants relates to the temporary bunker in the 'tween deck space, where the fire started, and to the coal in it.

It had been the practice to supply the ship with coal for a round trip, and to carry the fuel for the return voyage in various temporary bunkers. Due to a strike in England at [fol. 728] that period, coal was obtained here for the round trip, and on the voyage in question the temporary bunkers were filled even though it was planned that the "Galileo"

was not to return, because the surplus was to be transferred to another ship in Hull. When she arrived at New York on August 16th she had 160 tons still remaining in the temporary bunker in the 'tween deck space, which had not been consumed on the round trip. This coal was not removed when the ship was refueled for the voyage on which she was lost, but several hundred tons of the new supply was placed on top of it on August 26th. Two days later the ship departed and the fire was discovered in that compartment.

There are two aspects of the charge of unseaworthiness made by libellants, (1) the construction of the temporary bunker and (2) the fact that the new supply of coal was placed on top of the old, heated coal remaining in it.

It is undisputed that bituminous coal is in danger of spontaneous combustion if ventilation of the interior of the mass is permitted to a degree sufficient to allow oxidation of the coal, but insufficient to carry off the heat generated by the oxidation. Soft coal oxidizes when in contact with air, and the process is accelerated by an increase in temperature. The oxidation itself produces heat which if not carried off, will accelerate the process to the point of ignition. Consequently bunkers should be constructed so as to minimize the amount of air that may pass through the sides and bottom of the bunker into the mass of the coal, and some surface ventilation should be provided so as to carry off such gases as may be liberated. Putting a new [fol. 729] supply of coal on top of an old pile ordinarily entails some danger because the surface of the old pile, having been well aerated, is in process of oxidation and the new mass on top of it prevents the dissipation of the heat; furthermore, in the case of "run of the mine coal", as here involved, there is apt to be such a segregation of lumps as to permit air channels between the old and the new masses with a consequent supply of oxygen to the interior. If the old pile has already become hot, the danger of combustion from confining the heat by a superimposed new mass of coal, is, of course, vastly increased.

The temporary bunker in which the fire started was a compartment extending across the entire width of the vessel, fifty feet, and was formed by erecting a wooden bulkhead athwartship at a distance of 33 feet forward of the permanent cross bunker. It was thus merely a part of the

'tween deck cargo space enclosed between the wooden athwartship bulkhead and the forward wall of the permanent cross bunker. A large hatchway near its center gave access to it from the main deck.

The only questions in regard to its construction that need be considered in detail are whether this wooden bulkhead which separated it from the cargo space forward permitted air to pass into the interior of the mass of the coal to a dangerous degree, and if so, whether this contributed to the fire. Such air would oxidize the coal piled against the bulkhead and the resultant heat would be confined within the mass, with the consequence that there would be a tendency to spontaneous combustion.

[fol. 730] Two other questions in regard to the temporary bunker were raised in the course of the trial which may be summarily eliminated. Objection was raised to the arrangement of the two ventilators from the compartment to the main deck, on the ground that a sufficient draft would not be created to properly ventilate the surface of the mass; but the overwhelming weight of the evidence is that this could not have contributed to the fire. Indeed, two of libellants' own experts concurred in that opinion (Parr and Stanley). Also, there was some mention of the possibility of air penetrating the mass of coal through the rear wall of the temporary bunker which separated it from the permanent bunker. The latter, however, was filled with coal which did not ignite spontaneously, and it is impossible that air could have passed from it into the temporary bunker and caused a fire there, especially if, as libellants claim, the combustion started in the forward part of the temporary bunker.

Considering, then, the adequacy of the wooden bulkhead which formed the forward wall of the temporary bunker, it was constructed of vertical planks, 10 inches wide, 3 inches thick and 10 feet long, reaching from the floor to the top of the 'tween deck space, and held in place by having their ends inserted into slots on the floor and on the ceiling. The slots were formed by horizontal lumber fastened to the floor and to the ceiling, with a space between parallel pieces sufficient to accommodate the ends of the planks. The edges of the planks were planed and were placed tight together, and wooden battens three inches wide were nailed

over the crevices, from top to bottom and on both sides of [fol. 731] the bulkhead. A dust curtain made of closely woven fabric was nailed on the cargo side of the bulkhead, but since it was not air-tight, it was not important for our purpose.

The bulkhead was not absolutely air-tight, though it was dust-proof. Unquestionably some air could pass under the battens and through the crevices between the edges of the planks; also under the horizontal lumber and the ends of the planks. The amount, however, would be small unless there was a considerable difference in air pressure on the two sides of the bulkhead. This would not ordinarily occur because the cargo space forward and the bunker were enclosed between two steel bulkheads with nothing to cause a draft from one compartment to the other after the hatches were covered, except an improper operation of the ventilators. The cargo space and the temporary bunker each had two ventilators designed as an intake and outgo for each compartment, and if so operated there could be no material draft through the bulkhead. Of course the oxidation of the coal and the heat generated would have a tendency to draw air from the vicinity, including the crevices in the bulkhead; but that would be in small quantities.

The ideal bunker is absolutely air-tight below the level of the top of the coal, but has probably never been attained. The nearest approach to it in practice is in permanent bunkers constructed entirely of steel. Temporary bunkers always have at least one wooden bulkhead which necessarily permits the passage of some air into the body of the coal.

The use of a wooden bulkhead on a bunker, whether permanent or temporary, and the consequent penetration [fol. 732] of some air into the body of the coal does not, in itself, make a ship unseaworthy; otherwise every vessel with a temporary, bunker would be unseaworthy, and many more with wooden bulkheads on their permanent bunkers. The danger arising from the interior ventilation of the coal through the bunker wall is ordinarily obviated by not retaining the coal too long and by inspecting it from time to time and removing such parts as have become hot. These precautions have to be taken in even the best bunker, and in the case of those less safe they have to be increased.

The bulkhead in question was not the best type of wooden bulkhead from the standpoint of air-tightness. While I find that the planks and battens and horizontal pieces were all in good condition, other methods might have been adopted which would have been slightly more effective in excluding air. Sometimes wooden bulkheads are made of two thickness of overlapping planks, which would probably be more effective than single planks with battens on both sides. Sometimes paper is pasted over the crevices, which was not done in this case. Furthermore, caulking would probably have diminished the passage of air.

The preponderance of the evidence, however, is in favor of a finding that the bulkhead was reasonably suited to its purpose, and complied with the requirements of ordinary prudence. It was of a type in common use for bunkers, and while that fact in itself does not prove that the bulkhead was sufficient, from all the evidence I am convinced that it was. The experts on the two sides, of course, differed, but those for respondent had more weight. The principal [fol. 733] ones for the libellants, Parr and Porter, had practically no maritime exp rience and they with Stanley seemed to think that every bunker was unsafe which was not air-tight, a condition which cannot be attained in practice. On the other hand, the respondent produced the senior engineer surveyor for Lloyds Registry in New York, a surveyor of the Board of Underwriters of New York, and the chief surveyor of the Bureau Veritas of the International Register of Shipping for the United States and others especially Commander Star whose testimony supports this finding.

In determining the adequacy of the bulkhead there must be considered the normal period during which coal would be retained in the temporary bunker. The 160 tons had been in it for almost two months which was longer than would be expected, as the "Galileo" was operated, yet no fire occurred in it until it was covered with a new supply. It is true that hot spots had developed in it, but these were not significant, because they are apt to occur in any bunker after such a length of time.

Not only was the bulkhead adequate in my opinion but even if it did fall below the proper standard of safety, I do not believe that fact can be held a contributory cause of the

fire which occurred. This question has two aspects in that it relates to the period before and to the period after the new supply of coal was loaded. At the time the new supply was put on top of it, the old coal was in a sloping mass against the bulkhead and the sides of the vessel, about seven feet high and extending out about twice as far. Hot spots had developed in it of sufficient intensity to burn the boots of the trimmers. When the new coal was placed on [fol. 734] top of it and thus confined the heat, I believe that the air which made possible further oxidation was either retained on the surface of the old pile or found access through the channels formed by the lumps in the new supply. It seems to me impossible that the air which continued the oxidation could have come through the bulkhead at the back of the mass, especially in view of the fact that it only took two days for the fire to break out. It is impossible to determine with certitude where the combustion started, but I believe it much more likely to have first occurred over the hot spots which the trimmers encountered than back against the bulkhead. Assuming the heated condition of part of the old coal, I am convinced that the new supply would have caused a fire in even a perfect bunker.

As to the other aspect of the question, if it be assumed that the alleged deficiency of the bulkhead caused the heating of the old coal, I think it was merely a condition and not a contributing cause of the fire. Certainly the immediate cause was the gross negligence of the chief engineer in loading the new supply on top of the old coal which contained hot spots. These were of common occurrence in all types of bunkers and whatever the construction, were to be expected and guarded against before new coal was added. In themselves they would not have lead to fire, because in normal course all the old coal would have been removed within a few days. Assuming that the bulkhead were deficient, it would be pure surmise to say that this caused the actual hot spots; but even if that conclusion were reached, I believe that the deficiency merely gave rise to a [fol. 735] condition in the coal which would be not unusual in a proper bunker, and was not a contributing cause of the fire which was really brought about by covering the coal with a new supply.

There remains for consideration the question whether respondent is liable on account of the unseaworthiness

caused by the negligent act of the chief engineer in loading a new supply on the hot coal. Libellants claim that respondent failed in a non-delegable duty to have reasonable care exercised to make the vessel seaworthy before her departure. Concededly at the commencement of the voyage the "Galileo" had within her a condition so dangerous that a bunker fire was inevitable and did in fact result within six hours.

The Fire Statute, on which respondent relies for defense, provides, U. S. C. A., Title 46:

"Sec. 182. Loss by Fire.—No owner of any vessel shall be liable to answer for or make good to any person any loss or damage, which may happen to any merchandise whatsoever, which shall be shipped, taken in, or put on board any such vessel, by reason or by means of any fire happening to or on board the vessel, unless such fire is caused by the design or neglect of such owner."

"Sec. 187. Remedies Reserved.—Nothing in the five preceding sections shall be construed to take away or affect the remedy to which any party may be entitled, against the master, officers, or seamen, for or on account of any embezzlement, injury, loss, or destruction of merchandise, or property, put on board any vessel, or on account of any [fol. 736] negligence, fraud, or other malversation of such master, officers, or seamen, respectively, nor to lessen or take away any responsibility to which any master or seaman of any vessel may by law be liable, notwithstanding such master or seaman may be an owner or part owner of the vessel."

It is apparent that the statute was intended to distinguish between the neglect of the owner as such and the negligence of the ship's officers; and to relieve the owner from all liability for damage to cargo caused by fire unless the fire was caused by the neglect of the owner as such. In the case at bar the fire was caused by the negligence of the ship's chief engineer. The libellants, however, contend that (1) as a matter of fact there was neglect by the owner in not maintaining such supervision as would have prevented or corrected the chief engineer's negligence, and (2) as a matter of law the negligence of the chief engineer is chargeable to the owner notwithstanding the distinction between the two in the statute.

In reference to the alleged actual neglect by the owner, it appears that respondent had no marine superintendent nor superintending engineer nor other similar shore representative at New York though this was one of the terminals of the line. When the boat arrived here on her last voyage, it was not intended to carry back any surplus coal beyond what was needed for the journey home, but the respondent cabled directions to carry 850 tons additional for transfer to a sister ship. The master and the chief engineer there-[fol. 737] upon decided to carry part of this additional coal in the 'tween deck temporary bunker, and the chief engineer alone decided to load it on top of 160 tons which remained from the previous voyage. The owner was chargeable with notice that the 'tween deck compartment might be used as a temporary bunker, but had no notice that old coal remained in it, that this coal had hot spots and that the new supply would be put on top of it. Respondent had previously given written instructions to its ship engineers (Ex. G) including that of the "Galileo", to see that coal was not permitted to remain in a bunker indefinitely, but was all cleaned out before new coal was added or at least put into such position that it would be used before the new coal.

The matter of determining whether to remove old coal from a temporary bunker before loading a new supply in it was within the province of a chief engineer of a steamer. It would be unusual for an owner or a shore representative to determine a detail of that sort, because it was an act of operation or management of the ship which would naturally be left to its officer. It was not neglect on the owner's part not to have a shore representative at New York, but even if there had been one he would not normally have participated in the chief engineer's decision on that point. There was no way in which respondent could have prevented the mistake except by having a shore representative supervise every detail of the operation and management of the ship while in port, which the law does not require.

Nor could due diligence on the owner's part have corrected the evil before the vessel commenced her voyage. Once the new supply had been loaded no inspection of the [fol. 738] temporary bunker would have disclosed the danger until about the time of the departure. Less than two days elapsed between the completion of the loading and the departure and during most, if not all, of that period an in-

spection would have been futile. There was, therefore, no neglect on the part of the owner as distinguished from that of the chief engineer which contributed to the fire.

Libellant's contention that respondent is liable for the loss even though it was caused solely by the negligence of the chief engineer is based on the theory that respondent was under a contractual obligation to the shippers that reasonable care be exercised by all concerned to make the vessel seaworthy before she left port. It is not contended that the doctrine of respondent superior makes respondent liable, but that the negligence of the chief engineer caused a breach of contract on the part of the owner. The Fire Statute, however, was a part of the contract and respondent's contractual obligation does not cut down such exemption as may have been granted by the statute.

Libellants constrne the statute to mean that the exemption is granted only upon condition that the owner's general maritime obligation in regard to the seaworthiness of the vessel at the commencement of the voyage be fulfilled to the extent of having due care exercised by all connected with it, whether the owner's representatives or the ship's officers; in other words, that the distinction which the statute makes between the owner's neglect and the ship officers' negligence has no application to matters affecting the seaworthiness of the vessel at the commencement of the [fol. 739] voyage. In support of this contention are cited many cases involving the Harter Act.

It should be noted that the Fire Statute has no particular application to a vessel on a voyage, and makes no mention whatever of its seaworthiness. In the Harter Act an express condition of the exemption from liability is that the owner exercise due diligence to make the vessel seaworthy, and the courts have construed this to include due diligence on the part of the officers. In the Fire Statute such express provision is entirely lacking, and the exemption is granted merely on the condition that the fire be not caused by the design or neglect of the owner which is distinguished in the statute from the negligence or malfeasance of an officer. To adopt libellant's construction would be to read into the statute a provision similar to that expressly stated in the Harter Act, which I believe is beyond the Court's power.

In each of the cases upon which libellants rely where an owner was held liable for damages caused by fire, there was

actual neglect on the part of the owner as such, and not merely negligence of an officer of the ship. (Arkell & Douglass, Inc. v. United States, 13 Fed. (2d) 55; Bank Line v. Porter, 25 F. (2d); Williams S. S. Co. v. Wilbur, 9 F. (2d) 622; The Etna Maru, 33 Fed. (2d) 232.) There are no expressions in these opinions indicating that the exemption given to owners by the Fire Statute excludes such acts of negligence by the ship's officers as cause the vessel to be unseaworthy before breaking ground. It is true that in the case of the "Etna Maru" the opinion in the District Court did contain such expressions (20 Fed. (2d) 143), but they were not approved in the Circuit Court of Appeals.

[fol. 740] Finally libellants contend that in the bills of lading respondent waived the protection of the Fire Statute. There are no provisions in the bills of lading that tend to indicate such an intention, but if there were they would be completely negatived by one of the following clauses, either of which appears in each bill of lading:

"It is also mutually agreed that this shipment is subject to all the terms and provisions of, and all the exemptions from liability, contained in the Act of Congress of the United States, approved on the 13th day of February, 1893, and entitled an 'Act relating to the navigation of vessels,' etc., and to Sections 4281 and 4287, each inclusive, of the United States Statutes."

"This shipment is subject to the provisions of Sections 4281-4286, inclusive, of the Revised Statutes of the United States."

Decree for respondent.

Frank J. Coleman, U. S. D. J.

August 19, 1930.

[fol. 741] In United States District Court, Southern District of New York

Present: Honorable Frank C. Coleman, District Judge.

Earle & Stoddart, Inc.; Earle, Stoddart & Clayton, Ltd.; E. Capelcure & Co., Ltd.; Strauss & Co., Ltd.; Micks, Lambert & Co.; John Doe Micks, Richard Roe Lambert, John Doe and Richard Roe, Copartners, Trading under

the Name and Style of Micks, Lambert & Co.; Sanday & Co., Inc.; Henry Leetham & Sons, Limited; Sanday & Co., Limited; W. S. Williamson & Co.; W. S. Williamson, John Doe and Richard Roe, Copartners, Trading under the Name and Style of W. S. Williamson & Co.; Kingan & Company; Kingan & Co., Ltd.; Schuckl & Company, Inc.; Cooperative Wholesale Society, Ltd., Pelling, Stanley & Co., Ltd.; A. E. Staley Mfg. Co.; H. Lionel Tydeman & Co.; H. Lionel Tydeman, John Doe and Richard Roe, Copartners, Trading under the Name and Style of H. Lionel Tydeman & Co.; A. E. Chew; Stuebing Truck Company; W. P. Notcutt, Limited; R. E. Dietz Company; E. & F. Turnbull, Ltd.; Certainteed Products Corporation; B. L. Roberts; F. E. Booth Co., Inc.; United Sales Organizations, Ltd.; The New Jersey Zinc Sales Co., Inc.; Morris Ashby, Limited; Republican Mining & Metal Co., Ltd.; The Cookson Lead & Antimony Co., Ltd.; James Hewitt & Co., Ltd.; United States Steel Products Company; Ruston & Hornsby, Limited; California Packing Corporation; R. & W. Davidson, Limited; J. V. Faber & Co., Ltd.; Metcalfe's Stores, Ltd.; Broughs, Ltd.; Thomas Bell & Son, Ltd.; Buemann & Riley Bros., Ltd.; W. P. Tanner-Gross & Company, Inc.; Watson & Philip, Ltd.; Wilson D. Lyon, Loren M. Cowdrey and A. Gordon Wilson, Copartners, Trading under the Name and Style of Lyon, Cowdrey & Wilson; Angus Watson & Co., Ltd.; Hawaiian Canneries Co., Ltd.; The Baserot [fol. 742] Company; Barry Hall & Co., Inc.; Meredith Brothers & Co., Ltd.; Simpson, Roberts & Co., Ltd.; Acheson Graphite Company; Cromil Engineering Co., Ltd.; T. M. Sinclair & Co., Ltd.; W. P. Sinclair & Co., Ltd.; Bemis Bros. Bag Company; Joseph Rank, Ltd.; Griffith-Durney Company; Morris & Jones, Limited; Walker Canning Company; Armour & Company, Ltd.; Pillsbury Flour Mills Company; Edward Rathbone & Son; Edward Rathbone, John Doe Rathbone, Richard Roe Rathbone, John Doe and Richard Roe, Copartners, Trading under the Name and Style of Edward Rathbone & Son; American Chain Company, Inc.; Joh. Olafsson & Co.; Joh. Olafsson; John Doe and Richard Roe, Copartners, Trading under the Name and Style of Joh. Olafsson & Co.; Tide Water Oil Company; Armour & Company; North American Provision Company; Morris & Co., Ltd.;

A. V. Berner & Company, Inc.; James Arnott & Sons, Ltd.; James B. Berry Sons Company, Inc.; Consolidated Dairy Products Co.; Roberts & Schaefer Company, Hugh Wood & Co., Ltd.; Goodall Clayton & Co., Ltd.; L. Sonneborn Sons, Inc.; Waverly Oil Works Co.; Jacob Dold Packing Company; The Leavitt Machine Co.; Caldwell & Company, Inc.; Langstaff Erembert & Co., Ltd.; The Barber Asphalt Company; Walter M. Field & Company; Walter M. Field, John Doe and Richard Roe, Copartners, Trading under the Name and Style of Walter M. Field & Company; A. M. Landauer, B. Landauer, W. T. Hammond and D. J. Saunders, Copartners, Trading under the Name and Style of Landauer & Company; Bay Side Canning Co.; Starr Fruit Products Company; Gabriel Nachman, Inc.; Jebb Bros., Ltd.; George F. Smith & Son, Limited; Strathmore Paper Company; California Co-Operative Canneries; M. B. Jones & Co., Inc.; Cargo Superintendents, Ltd.; Grain Union, Ltd.; Reynolds, Stott & Haslegrave, Ltd.; Keighley, Maxsted & Company, John Doe Keighley, Richard Roe Keighley, John Doe Maxsted, Richard Roe Maxsted, John Doe and Richard Roe, Copartners, Trading under the Name and Style of Keighley, Maxsted & Company; Canadian Co-Operative Wheat Producers, Ltd.; A. Zerega's Sons, Consolidated; Continental Produce Company, Ltd.; Federated Metals Corporation; The Felling Zinc Oxide Co., Ltd.; Heskel Supply Co., Inc.; Soeteman Freres, John Doe Soeteman, Richard Roe Soeteman, John Doe and Richard Roe, Copartners, Trading under the Name and Style of Soeteman Freres; S. Henle, Inc.; Bartoline (Hull), Ltd.; Thomas-Body Company, Inc.; Morris & Co. (Meat Importers), Ltd.; Pitt & Scott, Inc.; Bureau [fol. 743] of American Mfgrs. in Europe, Ltd.; Arthur I. Rackliff, R. J. Heinz Co.; R. J. Heinz Company, Ltd.; J. Stevens Arms Company; High Rock Knitting Company; A. T. Singer; Wilson & Co., Inc.; Wilson & Co., Inc.; Melady Grain Co., Inc.; Spear & Thorpe; John Doe Spear, Richard Roe Thorpe, John Doe and Richard Roe, Copartners, Trading under the Name and Style of Spear & Thorpe; O. M. Earle Co., Inc.; Humber Fruit Brokers, Ltd.; E. I. du Pont de Nemours & Company, Inc.;

Kynoch, Ltd.; Vickers, Ltd.; Nobel Industries, Ltd., Plaintiffs,

against

Ellerman's Wilson Line, Limited, Respondent

Decree—Sept. 26, 1930

The issues in this cause having duly come on to be heard before this Court on the pleadings and proofs adduced by the respective parties, and having been duly argued by counsel for the respective parties, and due deliberation having been had thereon, and the Court having filed its opinion in writing, dismissing the libel herein, and the costs of the respondent having been duly taxed at the sum of $748.05,

Now, on motion of Kirlin, Campbell, Hickox, Keating & McGrann, proctors for the respondent, Ellerman's Wilson Line, Limited, it is

Ordered, adjudged and decreed that the libel herein be, and it hereby is, dismissed with costs; and it is further

Ordered, adjudged and decreed that the respondent, Ellerman's Wilson Line, Limited, have, receive and recover of and from the libelants, Earle & Stoddart, Inc.; Earle, Stoddart & Clayton, Ltd.; E. Capelcure & Co., Ltd.; Strauss & Co., Ltd.; Micks, Lambert & Co.; John Doe Micks, Richard [fol. 744] Roe Lambert, John Doe and Richard Roe, copartners, trading under the name and style of Micks, Lambert & Co.; Sanday & Co., Inc.; Henry Leetham & Sons, Limited; Sanday & Co., Limited; W. S. Williamson & Co.; W. S. Williamson, John Doe and Richard Roe, copartners, trading under the name and style of W. S. Williamson & Co.; Kingan & Company; Kingan & Co., Ltd.; Schuckl & Company, Inc.; Co-operative Wholesale Society, Ltd.; Pelling, Stanley & Co., Ltd.; A. E. Stanley Mfg. Co.; H. Lionel Tydeman & Co.; H. Lionel Tydeman, John Doe and Richard Roe, copartners, trading under the name and style of H. Lionel Tydeman & Co.; A. E. Chew; Stuebing Truck Company; W. P. Notcutt, Limited; R. E. Dietz Company; E. & F. Turnbull, Ltd.; Certain-Teed Products Corporation; B. L. Roberts; F. E. Booth Co., Inc.; United Sales Organizations, Ltd.; The New Jersey Zinc Sales Co., Inc.; Morris Ashby, Limited; Republican Mining & Metal Co., Ltd.; The Cookson Lead & Antimony Co., Ltd.; James

Hewitt & Co., Ltd.; United States Steel Products Company; Ruston & Hornsby, Limited; California Packing Corporation; R. & W. Davidson, Limited; J. V. Faber & Co., Ltd.; Metcalfe's Stores, Ltd.; Broughs, Ltd.; Thomas Bell & Son, Ltd.; Buemann & Riley Bros., Ltd.; W. P. Tanner-Gross & Company, Inc.; Watson & Philip, Ltd.; Wilson D. Lyon, Loren M. Cowdrey and A. Gordon Wilson, copartners, trading under the name and style of Lyon, Cowdrey & Wilson; Angus Watson & Co., Ltd.; Hawaiian Canneries Co., Ltd.; The Baserot Company; Barry Hall & Co., Inc.; Meredith Brothers & Co., Ltd.; Simpson, Roberts & Co., Ltd.; Acheson Graphite Company; Cromil Engineering Co., Ltd.; T. M. Sinclair & Co., Ltd.; W. P. Sinclair & Co., [fol. 745] Ltd.; Bemis Bros. Bag Company; Joseph Rank, Ltd.; Griffith-Durney Company; Morris & Jones, Limited; Walker Canning Company; Armour & Company, Ltd.; Pillsbury Flour Mills Company; Edward Rathbone & Son; Edward Rathbone, John Doe Rathbone, Richard Roe Rathbone, John Doe and Richard Roe, copartners, trading under the name and style of Edward Rathbone & Son; American Chain Company, Inc.; Joh. Olafsson & Co.; Joh. Olafsson, John Doe & Richard Roe, copartners, trading under the name and style of Joh. Olafsson & Co.; Tide Water Oil Company; Armour & Company; North American Provision Company; Morris & Co., Ltd.; A. V. Berner & Company, Inc.; James Arnott & Sons, Ltd.; James B. Berry Sons Company, Inc.; Consolidated Dairy Products Co.; Roberts & Schaefer Company, Hugh Wood & Co., Ltd.; Goodall Clayton & Co., Ltd.; L. Sonneborn Sons, Inc.; Waverly Oil Works Co.; Jacob Dold Packing Company; The Leavitt Machine Co.; Caldwell & Company, Inc.; Langstaff Erembert & Co., Ltd.; The Barber Asphalt Company; Walter M. Field & Company; Walter M. Field, John Doe and Richard Roe, copartners, trading under the name and style of Walter M. Field & Company; A. M. Landauer, B. Landauer, W. T. Hammond and D. J. Saunders, copartners, trading under the name and style of Landauer & Company; Bay Side Canning Co.; Starr Fruit Products Company; Gabriel Nachman, Inc.; Jebb Bros., Ltd.; George F. Smith & Son, Limited; Strathmore Paper Company; California Cooperative Canneries; M. B. Jones & Co., Inc.; Cargo Superintendents, Ltd.; Grain Union Ltd.; Reynolds, Stott & Hasle-

grave, Ltd.; Keighley, Maxsted & Company, John Doe [fol. 746] Keighley, Richard Roe Keighley, John Doe Maxsted, Richard Roe Maxsted, John Doe and Richard Roe, copartners, trading under the name and style of Keighley, Maxsted & Company, Canadian Cooperative Wheat Producers, Ltd.; A. Zerega's Sons, Consolidated; Continental Produce Company, Ltd.; Federated Metals Corporation; The Felling Zinc Oxide Co., Ltd.; Heskel Supply Co., Inc.; Soeteman Freres, John Doe Soeteman, Richard Roe Soeteman, John Doe and Richard Roe, copartners, trading under the name and style of Soeteman Freres; S. Henle, Inc.; Bartoline (Hull), Ltd.; Thomas-Body Company, Inc.; Morris & Co. (Meat Importers), Ltd.; Pitt & Scott, Inc.; Bureau of American Mfgrs. in Europe, Ltd.; Arthur I. Rackliff, R. J. Heinz Co.; R. J. Heinz Company, Ltd.; J. Stevens Arms Company; High Rock Knitting Company; A. T. Singer; Wilson & Co., Inc.; Wilson & Co., Inc.; Melady Grain Co., Inc.; Spear & Thorpe; John Doe Spear, Richard Roe Thorpe, John Doe and Richard Roe, copartners, trading under the name and style of Spear & Thorpe; O. M. Earle Co., Inc.; Humber Fruit Brokers, Ltd.; E. I. du Pont de Nemours & Company, Inc.; Kynoch, Ltd.; Vickers, Ltd.; Nobel Industries, Ltd., and their stipulators for costs, the sum of $748.05, its costs as taxed, with interest thereon until paid, and that the said respondent have execution against the libelants and their stipulators for costs therefor; and it is further

Ordered that unless this decree be satisfied, or an appeal be taken therefrom within ten days after service of a copy thereof on the proctors for the libelants, execution may issue against the libelants and the stipulators for costs, to obtain satisfaction of this decree.

Frank J. Coleman, U. S. D. J.

[fol. 747] In United States District Court

[Title omitted]

Notice of Appeal

Sirs: Please take notice that Earle & Stoddart, Inc., et als., the libellants in the above-entitled cause, hereby appeal to the United States Circuit Court of Appeals for the

Second Circuit from the final decree signed herein on the 26th day of September, 1930, and entered herein the 1st day of October, 1930, and from each and every part of said decree.

Dated December 23rd, 1930.

Yours, etc., Bigham, Englar, Jones & Houston, Proctors for Libellants, Earle & Stoddart, Inc., et als., No. 64 Wall Street, New York City.

To Charles Weiser, Esq., Clerk; Kirlin, Campbell, Hickox, Keating & McGrann, Esqs., Proctors for Respondent, 27 William Street, New York City.

Appeal allowed December 23, 1930.

Woolsey, United States District Judge.

[fol. 748] IN UNITED STATES DISTRICT COURT

[Title omitted]

ASSIGNMENT OF ERRORS

1. The Court erred in failing to hold that when the respondent admitted that it did not deliver the cargo at destination, and then introduced evidence establishing that it breached the warranty of seaworthiness in the contract by supplying a dangerously unseaworthy vessel at the time the "Galileo" sailed from New York, and failed to show that due diligence to make her safe and seaworthy was in fact exercised by it and the vessel's officers up to the instant of sailing, the libellants' cause of action was complete and that no subsequently-occurring event during the voyage, such as the outbreak of fire resulting inevitably from the preceding unseaworthiness, could be relied upon as a defense or excuse for the previously committed breach.

2. After finding as facts that the "Galileo" was in dangerously unseaworthy condition when she sailed from New York and that loss from this cause was inevitable and [fol. 749] did in fact result within six hours thereafter, and the respondent having failed to show that due diligence was exercised by it and the vessel's officers up to the moment of sailing to make the "Galileo" safe and seaworthy, the Court erred in failing to draw the legal inference that the

dominant and proximate cause of loss was unseaworthiness, and that the mere fact that the damages resulting from the unseaworthiness subsequently took the incidental form of a fire, did not entitle the respondent to exemption from liability under the Fire Statute.

3. The Court erred in holding that in a case in which a fire is the result of unseaworthiness on sailing from the loading port, and the cause of the unseaworthiness is the failure of competent persons to inspect or remedy a dangerous and unseaworthy condition which was apparent and observable before sailing, the Fire Statute nevertheless relieves the shipowner from liability because one of the persons whose attention was called to the unseaworthy condition and who did nothing to remedy it before sailing happened to be an engineer officer of the vessel.

4. The Court erred in holding that the due diligence required by the express warranty in the bill of lading that the vessel would be seaworthy on sailing from the loading port provided due diligence of competent persons could make her so meant due diligence in selecting a ship's engineer officers or in obtaining certificates, and did not mean that due diligence in connection with seaworthiness would in fact have to be used by competent persons up to the time of sailing.

[fol. 750] 5. The Court erred in failing to hold that the mere fact that fire was made an excepted peril by the Fire Statute, and was mentioned generally as one of the excepted perils in the bill of lading, did not relieve the shipowner from the consequences of the breach of the express warranty in the bill of lading that seaworthiness at the time of sailing from the loading port was warranted in so far as the actual exercise of due diligence by the shipowner personally, or by competent inspectors employed by it, up to the moment of sailing, could make her seaworthy.

6. The Court erred in holding that by enacting a statute making fire one of the excepted perils, Congress intended also by implication to relieve the shipowner from his warranty that due diligence would in fact be used by competent persons up to the time of sailing from the loading port to make the vessel seaworthy.

7. The Court erred in failing to hold that the Fire Statute does not exonerate a shipowner from liability for damages to goods in a case in which the dominant cause of the damage is unseaworthiness, and in which the fire is an inevitable and intermediate result of the unseaworthiness.

8. The Court erred in failing to hold that the respondent was personally negligent in not employing a competent person to make an inspection of the "Galileo" or her reserve or excess bunkers before sailing from the loading port, New York, at which the cargo had been booked and the excess coal loaded.

9. The Court found as a fact that the damage to this cargo was inevitable at the time the "Galileo" sailed from [fol. 751] New York. The respondent admitted by written stipulation that the damage resulted from the fire, and the Court found that the fire resulted inevitably from the unseaworthiness of the vessel at the time of sailing.

10. The Court erred in failing to hold that the Fire Statute does not relieve a shipowner from liability if the fire is inevitable on the vessel's sailing from the loading port and if the dominant cause of the subsequent fire was an unsafe and unseaworthy condition on sailing which was observable or otherwise ascertainable before sailing and which could have been prevented or remedied by efforts of competent persons in the actual exercise of due diligence.

11. The Court erred in holding that it was Chief Engineer Oxtoby alone who was negligent and who loaded the new coal on the old, thus causing the inevitable fire.

12. The Court erred in failing to hold that the ordinary scope of Oxtoby's duties as chief engineer of the "Galileo" were limited to the stowage and care of coal which was intended to be used in the furnaces on the "Galileo".

13. The Court erred in holding that it was within the ordinary scope of a chief engineer's duties on a vessel to stow and care for 850 tons of coal which was not intended ever to be used as fuel on that vessel, but was merely being carried as cargo to another port to be used as fuel on other vessels.

14. The Court erred in failing to hold that the evidence did not establish that this 850 tons of excess or "Francisco"

[fol. 752] coal was ever in fact used as fuel on the "Francisco" after arrival at destination, or was in fact being carried otherwise than as cargo for sale in the open markets at destination.

15. The Court erred in failing to find that the managing owner of the respondent at Hull cabled the respondent's New York general cargo contracting and booking agent to ship 850 tons of coal on the "Galileo" for carriage as cargo to Hull to be used on another vessel; that the respondent's New York agent through Hicks, its pier superintendent, then purchased the coal and employed the stevedore Magarelli and his gang to load it on the "Galileo"; that Magarelli thereupon began loading the coal into the 'tween deck and other places designated not by the chief engineer, but by Hicks, who had conferred with the master; and that Magarelli thereupon began loading and completed the loading of the coal without receiving any instructions from or seeing the chief engineer at any time excepting to register a complaint with him regarding its dangerous condition after a considerable part of the coal had been loaded.

16. After finding that the libellants had shipped a general cargo on the "Galileo" as a common carrier; that the cargo had not been delivered at destination; that the "Galileo" was so unseaworthy and in such dangerous condition on sailing that a bunker fire was inevitable and did in fact result within six hours, and that neither the shipowner, the chief engineer nor anyone else made any effort [fol. 753] to correct any unseaworthiness that was observable on sailing or shortly before sailing; and in view of the written stipulation and concession by counsel for respondent that total loss of ship and cargo from such bunker fire on the "Galileo" was inevitable, the Court erred in failing to draw the legal inference that the respondent had failed to establish that the dominant and proximate cause of loss was fire, and not unseaworthiness, and in holding that the respondent had sustained the special defense of fire set up in its answer and was, accordingly, entitled under the Fire Statute to exemption from liability.

17. The Court erred in failing to hold that the respondent waived the benefit of the Fire Statute so far as loss from unseaworthiness was concerned by inserting in a special

clause in the bill of lading contract that it would be liable for loss from unseaworthiness unless due diligence was in fact exercised by itself and its representatives and by the officers of the "Galileo" to make the "Galileo" seaworthy on sailing.

18. The Court erred in holding that a shipowner is entitled to exemption from liability under the Fire Statute in a case in which the proximate cause of loss is unseaworthiness on sailing, and in which no fire occurred until after sailing and was then only a minor or immediate cause which inevitably followed from the preceding condition of dangerous unseaworthiness on sailing.

19. The Court erred in failing to hold that the proximate cause of loss being a dangerously unseaworthy condition [fol. 754] existing at time of sailing when no fire existed, the respondent was not entitled to rely in defense on a subsequently occurring fire which inevitably resulted from such unseaworthy condition and which was, therefore, only a minor and subsequently occurring expression of the previous unseaworthiness.

20. The Court erred in drawing the legal inference that in a case in which unseaworthiness on sailing from the loading port is the dominant and proximate cause of loss a common carrier by sea may exempt itself from liability by showing that no one used any care to make the vessel seaworthy on sailing, and that the chief engineer particularly was grossly careless before sailing.

21. The Court erred in failing to hold that as the written contract was at least ambiguous as to the applicability of the Fire Statute exception or the exception of unseaworthiness provided due diligence was in fact exercised by the vessel's officers and the respondent and its representatives up to the moment of sailing; and that, as the ambiguous language was drafted and printed in the bill of lading by the respondent, the ambiguity should be resolved against it.

22. After finding that the respondent cabled directions to carry 850 tons of coal additional on the "Galileo" for transfer to a sister ship at destination; that the respondent was chargeable with notice that the 'tween deck compartment might be used as a temporary bunker; that hot spots

were of common occurrence in all types of bunkers and [fol. 755] whatever the construction, and were to be expected and guarded against before new coal was added; and that it was the loading of this additional coal on the old coal that caused the fire, the Court erred in failing to hold that the respondent was personally negligent in not giving instructions to the master authorizing the incurring of expense of shifting or discharging the old bunker coal in the reserve 'tween deck bunker or in constructing another bunker compartment or incurring other necessary expense, or in failing to ascertain before issuing such absolute order to the master whether or not the conditions on the "Galileo" were such that 850 additional tons of coal could safely be carried.

23. The Court erred in failing to hold that the carriage, pursuant to respondent's personal order, of 850 tons additional coal on the "Galileo" for transfer to a sister ship at destination was a subject outside the scope of the ordinary duties of the chief engineer of the "Galileo", in view of the facts that the coal was not intended ever to be used on the "Galileo" and that the respondent realized this by issuing the order not to the chief engineer but to the respondent's New York shore representative of the "Galileo".

24. The Court erred in failing to hold that the managing officers of respondent had personal knowledge that this new and unusual quantity of coal would be loaded on the old coal in the bunkers because their cable order to the New York agents directed "Galileo" load 850 bunkers transference "Francisco".

[fol. 756] 25. The Court erred in failing to hold that it was the managing officers of the respondent, by means of their cable order of August 20, 1926, and not the chief engineer of the "Galileo", who decided that the new coal should be loaded in the bunkers and not in any space remaining in the cargo holds.

26. The Court erred in failing to hold that the respondent had not established that the respondent's personal order to load 850 tons in the bunkers could be carried out without a substantial quantity of such new coal being loaded on the old and dangerously heated coal.

27. The Court erred in failing to hold that respondent's order that 850 tons of coal be loaded in the bunkers for transference to the "Francisco" was forwarded by the respondent's New York agent to the stevedoring company without further instruction or qualification, and that after a considerable quantity of such additional coal had been loaded by the stevedores into this 'tween deck bunker and the very dangerous condition noted, the chief engineer was consulted for the first time with reference to it.

28. The Court erred in failing to hold that the respondent was bound by the testimony of the chief engineer of the "Galileo" that in view of the conditions existing on the "Galileo" the only possible method of complying with the respondent's cable order that 850 tons of coal be loaded in the bunkers of the "Galileo" for transference to the "Francisco" was by loading such coal on top of the old and dangerously heated 160 tons of coal in No. 3 'tween decks [fol. 757] unless that part of the "Galileo's" own bunker coal should be taken completely out of her bunkers and put in a hold reserved solely for cargo, namely, No. 2 shelter deck.

29. The Court erred in failing to hold that the 850 tons additional coal on the "Galileo" for transfer to a sister ship at destination was cargo and not bunker coal on the "Galileo" and, therefore, was outside the scope of the chief engineer's duties as chief engineer of the "Galileo".

30. The Court erred in failing to hold that the respondent was negligent in not instructing the master of the "Galileo" that the 850 tons additional coal should be carried by the "Galileo" as cargo in her cargo holds and not be mixed with the "Galileo's" own coal supply in her bunkers.

31. The Court erred in failing to hold that the respondent was negligent in issuing a special, unusual and unqualified order that 850 tons additional coal be carried on the "Galileo" for transfer to a sister ship at destination without giving any instructions to the master or chief engineer of the "Galileo" or authority to them with reference to incurring any necessary expense to enable such an unusual order to be carried out with safety.

32. The Court erred in failing to hold that the act of the respondent in ordering the "Galileo" to go to sea with-

out any adequate examination ever having been made of her while she was in the port of New York to determine whether or not she was safe and seaworthy to proceed to sea, and [fol. 758] without due diligence being in fact exercised to make her seaworthy, was a personal negligent act of the respondent.

33. The Court erred in failing to hold that the managing officers of the respondent were personally negligent in booking and loading cargo as a common carrier at New York and in then sending the vessel to sea without any adequate examination having been made of her while she was in the port of New York to determine whether or not she was safe and seaworhy to proceed to sea and without due diligence being in fact exercised to make her seaworthy.

34. The Court erred in failing to hold that the respondent was negligent in sending the "Galileo" once too often to sea without adequate examination of her in port, and that they acted from carelessness or economy or both, both being equally reprehensible.

35. The Court erred in failing to hold that the managing officers of the respondent were negligent in not asking the chief engineer or master of the "Galileo" for a report on the condition of the old coal in the bunkers or on the safety of loading and carrying new excess coal in the bunkers before they issued the arbitrary order that it be carried in her bunkers.

36. The Court erred in failing to hold that under the Fire Statute and the Maritime Law, it is not enough for a shipowner to show that one of the contributing causes to the happening of the fire was his servant's fault; and that he must show that his own fault was not also a contributing cause.

[fol. 759] 37. The Court erred in failing to hold that the managing officers of the respondents were negligent in not making inquiry before the "Galileo" sailed from New York regarding the condition of her bunker coal and in not instructing the master or chief engineer to make reports at regular periods.

38. The Court erred in failing to hold that the managing officers of the respondent were negligent in not making in-

quiry, or requiring regular reports, about the condition of the coal on the "Galileo" during the abnormal and temporary period during which she was carrying abnormal quantities of coal because of a strike in Enland, the carriage of which excess coal was known to the managing officers of the respondent to be dangerous in view of the Court's finding that hot spots are known by ship operators to occur subsequently in coal which is not consumed promptly or during the course of the current voyage.

39. The Court erred in holding that Congress intended by the Fire Statute to relieve a shipowner from his duty of seeing to it that due diligence is exercised to make his vessel seaworthy at the time she sails from her loading port.

40. The Court erred in holding that a clause inserted by a shipowner in the bill of lading could reduce the shipowner's duty of seeing to it that due diligence is exercised to make his vessel seaworthy at the time she sails from her loading port.

41. The Court erred in holding that the Fire Statute relieves a shipowner from liability for a loss caused by un- [fol. 760] seaworthiness on sailing from the loading port.

42. After finding that the theory of the libellants' suit was for breach of contract of carriage, and that on sailing from the loading port the "Galileo" was in such unseaworthy and dangerous condition that damage to all cargo on board was inevitable, the Court erred in not entering an interlocutory decree on the merits in favor of the libellants awarding recovery of all damages caused by such unseaworthiness and breach of contract.

43. The Court erred in holding that a subsequently-occurring event like fire could relieve a shipowner from an already existing liability for breach of contract committed at the time the vessel sailed from New York by supplying a vessel in such unseaworthy and dangerous condition that damage to all cargo on board was inevitable.

44. The Court erred in failing to hold that the hot spots in the old coal were a contributing cause of the damage to the cargo.

45. The Court erred in holding that the putting of a new supply of coal on top of the old coal that had become

heated in the temporary bunker was the sole contributing cause to the damage to the cargo.

46. The Court erred in failing to hold that the dangerously heated condition of the old coal was a co-operating and contributing cause with the putting of a new supply on top of the old coal.

[fol. 761] 47. The Court erred in holding that a shipowner may delegate to an independent stevedoring company at the loading port his entire duty of seeing to it that due diligence is exercised to make his vessel seaworthy on sailing from the loading port notwithstanding he fails to authorize or instruct the stevedoring company that he will pay all necessary expenses incurred in making the vessel seaworthy in the nature of removing or shifting old coal or erecting a new coal compartment, and notwithstanding the stevedoring company had no experience and is incompetent in making a vessel seaworthy.

48. The Court erred in holding that a shipowner may delegate to the chief engineer of his vessel the entire shipowner's duty of seeing to it that due diligence is exercised to make the vessel seaworthy on sailing from her loading port.

49. The Court erred in failing to hold that it was the personal act of the respondent's managing officers in ordering the unusual and excessive quantity of new coal for the S. S. "Francisco" to be loaded on the "Galileo" and the carrying out of that order by the stevedore Magarelli that was the proximate cause of the cargo damage, and that it was no excuse that third parties like the chief engineer did not interfere with the respondent's and stevedore's actions.

50. The Court erred in failing to find that respondent's own evidence established that the stevedore Magarelli had to a considerable extent, carried out respondent's personal order that the new coal be loaded on the "Galileo" before Magarelli received any instructions from the chief engineer [fol. 762] of the "Galileo" or even consulted or saw him.

51. The Court erred in failing to hold that it was only after the stevedore Magarelli had loaded a considerable quantity of the new coal in this temporary or reserve

'tween deck bunker and had thus carried out, to a substantial extent, the personal order of the respondent's managing officers that the additional 850 tons for the S. S. "Francisco" be loaded on the "Galileo", that Magarelli or anyone connected with the stevedoring company received any instructions whatever from the chief engineer or the captain of the "Galileo" with reference to where or how the coal should be loaded on her.

52. The Court erred in failing to hold that the respondent was bound by the testimony of its stevedore Magarelli that up to the time he complained about further loading of new coal on dangerously heated coal, he had received no instructions from the chief engineer or the master of the "Galileo" with reference to where or how the new coal was to be loaded.

53. The Court erred in failing to hold that the personal order of the managing officers of the respondent to the master of the "Galileo" was simply passed on by the master to the stevedoring company and respondent's shore representatives without any conference or consultation with the chief engineer of the "Galileo", and that the disposition made of the remainder of the 850 tons not loaded in this temporary bunker showed that the master and stevedores regarded this excess 850 tons as cargo and not [fol. 763] as bunker coal of the "Galileo" within the scope of the ordinary duties of the chief engineer.

54. The chief engineer of the "Galileo", having confessed at the trial that he had deliberately lied about the material facts of this case after the fire had occurred, and it being evident that his reversal of testimony at the trial was as an interested witness in trying to help the respondent to evade its liability to the cargo owners, which was obviously the same motive which actuated his previous story, the Court erred in failing to disregard entirely his testimony as not entitled to credibility.

55. The Court erred in failing to hold that the reports made by the chief engineer of the "Galileo" to the respondent on July 2, 1926, and on August 28, 1926, and to Superintendent Engineer Brackenbury before the "Galileo" sailed from New York on this voyage, gave sufficient knowledge to the managing officers of the respondent as to the conditions

existing on the "Galileo", to make it negligent for them to send her to sea without instructions being given that careful examination be made of the coal on board.

56. The Court erred in failing to hold that the reports made by the chief engineer of the "Galileo" at the end of each voyage in Hull did not give sufficient notice to the owners of the "Galileo" to make it negligent for them to send the "Galileo" to sea in the condition in which she was when she sailed from New York on this voyage.

[fol. 764] 57. The Court erred in failing to hold that the cable order of August 20, 1926, from the managing officers of the respondent to their New York agent that the "Galileo" load 850 tons of coal in her bunkers, did not give any discretion to the chief engineer or master as to where the coal should be loaded or as to whether or not it should be loaded in this only available bunker which was already partly full of coal.

58. After finding that New York was one of the terminals of the line, the Court erred in failing to hold that the managing officers of the respondent were negligent in not having a marine superintendent at New York.

59. After finding that New York was one of the terminals of the line, the court erred in failing to hold that the managing officers of the respondent were negligent in not having a superintendent engineer at New York.

60. The Court erred in ignoring respondent's own evidence, Respondent's Exhibit D, the cable order of the managing officers of the respondent, that the 850 tons of additional coal for transference to the "Francesco" must be carried by the "Galileo" in her bunkers.

61. The Court erred in finding that the master and the chief engineer were the ones who decided to carry part of the additional coal in the 'tween deck temporary bunker.

62. The Court erred in finding that the owner of the "Galileo" had no notice that old coal remained in this temporary bunker.

[fol. 765] 63. The Court erred in finding that the managing officers of the respondent had no notice that this old coal in the temporary bunker had hot spots.

64. The Court erred in finding that the managing officers of the respondent had no notice that the new supply of coal would be put on top of the old coal in this temporary bunker.

65. The Court erred in failing to hold that the managing officers of the respondent were negligent in never having instructed the master or chief engineer of the "Galileo" not to load new coal on top of old coal.

66. The Court erred in holding that the respondent had previously given written instructions to its ship engineers (Exhibit G), including those on the "Galileo", to see that coal in a bunker was all cleaned out before new coal was added or, at least, put into such position that it would be used before the new coal.

67. The Court erred in assuming that Respondent's Exhibit G covered any situation excepting one in which a bunker became completely empty in ordinary course of consumption on board the "Galileo".

68. The Court erred in assuming that Respondent's Exhibit G gave no instructions whatever to the chief engineer of the "Galileo" with respect to whether or not new coal should be loaded on old.

69. The Court erred in assuming that Respondent's Exhibit G covered anything excepting the permanent bunkers on the "Galileo".

[fol. 766] 70. The Court erred in assuming that Respondent's Exhibit G applied to the unusual excessive coal conditions on the "Galileo" at the beginning of this voyage.

71. The Court erred in failing to hold that the special cable order of the respondent of August 20, 1926, Respondent's Exhibit D, superseded Respondent's Exhibit G.

72. The Court erred in failing to hold that respondent had failed to introduce any evidence that the instructions contained in Respondent's Exhibit G were actually complied with at any time by the chief engineer of the "Galileo" or the chief engineers of other of its vessels, or that any

effort had been made by the respondent to see that they already complied with such instructions.

73. The Court erred in failing to find that the managing officers of the respondent had reasonable ground for believing that some old coal was in all of the bunkers when they issued the order that additional coal for the "Francesco" be loaded in those bunkers.

74. The Court erred in failing to find that the managing officers of the respondent were negligent in not ordering or authorizing the removal of the old coal in the bunkers at the time the cable order was issued to load the new coal.

75. After finding that putting a new supply of coal on top of an old pile ordinarily entails some danger, the Court erred in failing to find that the managing officers of the respondent were negligent in ordering a new supply of coal [fol. 767] to be loaded in the bunkers without issuing instructions that the old coal be first removed or authorizing the expense of doing so.

76. The Court erred in failing to hold that the managing officers of the respondent were negligent in not issuing instructions to the chief engineer, chief officer or other officers of the "Galileo" that the wooden bulkhead or bulkheads at the ends of coal bunkers be made as air-tight as practically possible.

77. The Court erred in failing to find that the respondent was bound by the testimony of the chief engineer and the chief officer that no efforts whatever were made to make the wooden bulkhead or bulkheads of this temporary coal bunker airtight.

78. The Court erred in failing to find that the managing officers of the respondent were negligent in failing to instruct the officers of the "Galileo" that reasonable efforts be made to make the wooden bulkheads in the temporary coal bunkers airtight up as high as the mass of coal.

79. The Court erred in failing to find that air passing through the wooden bulkhead into the mass of coal would oxidize not only the coal piled against the bulkhead but all the coal anywhere in the bunker past which the air current

would flow in its course through the mass of coal until it reached the top.

80. The Court erred in failing to find that two ventilators, both at the same end of a large rectangular coal bunker, taken in connection with a leaky wooden bulkhead [fol. 768] at the other end permitting air to pass in small currents through the mass of the coal, constituted usual, proper or safe ventilation.

81. The Court erred in assuming that the safety of the system of two ventilators at one end depended solely on whether or not it was sufficient to properly ventilate the surface of the mass and did not depend on and was not affected by the air currents which such a ventilation system would tend to set up between such ventilators and crevices in the wooden bulkhead at the other end.

82. The Court erred in failing to find that the respondent's witnesses conceded that many wooden bulkheads on other vessels were much more air-tight than this forward wooden bulkhead on No. 3 'tween deck bunker in the "Galileo", and that at nominal expense this wooden bulkhead could have been made much more safe and airtight than it was by means of dovetailing or overlapping the planking or by adding a layer of heavy paper of substantially airtight cloth.

83. The Court erred in failing to draw a distinction between the inconsiderable quantity of air which would flow through a properly constructed wooden bulkhead and the larger and unsafe quantity of air which flowed through this forward wooden bulkhead in No. 3 'tween deck reserve bunker which was concededly erected with no thought or care whatever for making it substantially airtight.

84. The Court erred in overlooking and failing to mention the evidence, including that of respondent's witnesses, [fol. 769] that wooden bulkheads on many ships are so constructed as to be much more airtight and safe than this forward wooden bulkhead in No. 3 'tween deck reserve bunker on the "Galileo".

85. After finding that the danger arising from the inferior ventilation of coal through the bunker wall is ordi-

narily obviated by inspecting it from time to time and removing such parts as have become hot, the Court erred in failing to find that the managing officers of the respondent were negligent in not instructing a marine surveyor, shore representative and/or the chief engineer to make such inspection and removals.

86. After finding that precautions of inspection have to be increased in the case of less-safe bunkers such as this temporary one on the "Galileo", the Court erred in failing to find that the managing officers of the respondent were negligent in not issuing instructions to a marine surveyor, shore representative or the chief engineer that such increased precautions should be taken and authorizing the expense thereof.

87. After finding that the fire and loss of cargo resulted from the hot spots in the old coal and loading of the new coal before sailing from New York, the Court erred in failing to draw the obvious inference that the air or oxygen which permitted the continuance of the oxidation to ignition point consisted of the air currents flowing through the crevices in the defective forward wooden bulkhead into and through the mass of the coal.

[fol. 770] 88. After finding that other methods might have been adopted which would have been slightly more effective in excluding air from passing through this forward wooden bulkhead such as by two thicknesses of overlapping planks or by paper pasted over the crevices, or by caulking, the Court erred in failing to find that the failure of the shipowner to authorize or issue instructions regarding the use of this simple and cheap means of fire prevention constituted negligence.

89. The Court erred in failing to find that the respondent's witness Heck, Senior Engineer Surveyor for Lloyd's Registry in New York, conceded that this wooden bulkhead could easily and cheaply be made much safer than it was.

90. The Court erred in announcing and applying the novel and dangerous doctrine that a ship-owner who carelessly fails to maintain a shore organization at one of the vessel's two principal loading and terminal ports for the purpose of superintending the maintenance of her seaworthiness up to

the time of sailing is under a less duty under any contract of affreightment to the shippers of cargoes at that port than is a careful ship-owner who does maintain a shore organization at the vessel's principal loading and terminal ports to superintend the maintenance of her seaworthiness.

91. After finding that the heated condition of part of the old coal was necessary as a co-operating factor with the loading of the new supply as causing the fire, the Court erred in failing to draw the inference that the heated con-
[fol. 771] dition of part of the coal was a contributing cause of the fire.

92. The Court erred in failing to find that the managing officers of the respondent were negligent in entrusting the loading of the new supply of coal to an independent stevedoring company without instructions or authority to incur necessary expense in first removing any dangerous old coal.

93. The Court erred in failing to find that the managing officers of the respondent were negligent in definitely instructing their New York representative and the stevedoring company that the new coal must be loaded in the bunkers, and without issuing instructions or giving authority to them or to anyone to incur any expense necessary in first making the bunkers safe for the new supply by removing any dangerous old coal, or in constructing a safer type of wooden bulkhead.

94. The Court erred in failing to find that if the respondent had constructed a more airtight form of wooden bulkhead the entry of air into the mass of the coal would have been stopped and a fire prevented notwithstanding any negligent act of the chief engineer in loading new coal on old coal.

95. The Court erred in failing to find that if the managing officers of the respondent had issued instructions that the emasculated and peculiarly one-ended form of surface ventilators be planked off, the flow of air through the mass
[fol. 772] of this coal would have been stopped and a fire prevented notwithstanding any negligent act of the chief engineer in loading new coal on old coal.

96. The Court erred in failing to find that the managing officers of the respondent were negligent in not complying

with the British Board of Trade's instructions that on a British steamer such as the "Galileo", the flow of air must be prevented through the mass of coal in the bunkers.

97. The Court erred in failing to find that the managing officers of the respondent were negligent in not having surface ventilators at both ends of the temporary coal bunker in No. 3 'tween deck, and in substituting for it an emasculated and one-ended form of surface ventilation which tended to create a draft between the one-ended ventilators and the defects or crevices in the wooden bulkhead at the other end of the bunker.

98. The Court erred in failing to find that the fact that the old coal was in heated condition showed that the crevices in the wooden bulkhead were so large as to be dangerous and tend to cause fire.

99. The Court erred in assuming, without evidence, that if the wooden bulkhead had been made as airtight as it could have easily and cheaply been made, the loading of a new supply of coal would have caused a fire.

100. The Court erred in failing to find that it was the new coal which had been loaded by Magarelli before he ever con- [fol. 773] sulted the chief engineer of the "Galileo" which caused the fire and loss of cargo, and not the remaining coal which was loaded afterwards.

101. The Court erred in failing to find that the chief engineer of the "Galileo" testified that Magarelli came to him and told him that the coal was hot to his feet and that the chief engineer brushed him aside and told him to go about his business, and that he, the chief engineer, had no time to pay attention to him.

102. The Court erred in failing to find that the cause of the fire and loss of cargo was not the mere failure of the chief engineer of the "Galileo" to pay any attention to Magarelli, but was the cable instruction of the managing officers of the respondent that the new coal be loaded on the "Galileo" in her bunkers, and the act of Magarelli in loading it in her bunkers.

103. The Court erred in finding that the mere fact that Magarelli happened to stop for a minute and complain to

Oxtoby and be ignored made Oxtoby's action the cause of the fire rather than the preceding action of Magarelli in loading part of the new coal on the old heated coal and his later action in loading the remainder on the heated coal pursuant to instructions from the managing officers of the respondent to their New York agent that such new coal must be loaded on the "Galileo" in her bunkers.

104. After finding that hot spots were of common occurrence in all types of bunkers and were to be expected and [fol. 774] guarded against before new coal was added, the Court erred in failing to find that the managing officers of the respondent were negligent in issuing an arbitrary cable order that all the new large quantity of coal must be loaded on the "Galileo" in her bunkers without qualifying the order by saying that the loading need not be done if there was old coal in the bunkers or if the old coal had hot spots, or authorizing any unnecessary expense in first removing the old coal and thus depriving the "Galileo" of part of her normal supply of bunkers.

105. The Court erred in finding that it was within the ordinary scope of the duties of the chief engineer of the "Galileo" to deprive the "Galileo" of part of her normal supply of bunkers by removing the remaining 160 tons in this temporary bunker therefrom and filling it up with coal intended for another vessel in a case in which the managing officers of the respondent had given no authority that any of the new coal should be available for use by the "Galileo" herself.

106. After finding that the negligent act of the engineer in loading a new supply on the hot coal caused the "Galileo" to become unseaworthy, the Court erred in failing to find that the managing officers of the respondent were negligent in ordering her to sea in such unseaworthy condition without instructions having been given that inspection should be made of her to determine whether or not she was seaworthy.

107. The Court erred in failing to find the fact which was conceded in counsel for respondent's brief at the trial that it was the heat in the coal which Chief Engineer Ox- [fol. 775] toby of the "Galileo" was told about by the stevedore Magarelli and which he deliberately disregarded which

caused the loss of the ship, and that it was the temperature of the old coal which Oxtoby knew about which caused the loss here, and that the fire would have been caused in any event by the fact that the coal remaining in the bunker, whatever its age, was hot.

108. The Court erred in failing to hold that it is no defense for a shipowner under the Fire Statute to show that his servant's negligence was a contributing cause of the fire.

109. The Court erred in failing to find that at the time this cargo was shipped it was common knowledge among shipowners and persons in the shipping business that it was unsafe and tended toward spontaneous combustion and fire to use a wooden bulkhead for confining coal, which bulkhead was not as airtight as reasonable efforts could make it; and that reasonable and usual efforts could on the evidence in the present case have made this bulkhead on the "Galileo" substantially more airtight and thus have absolutely prevented a fire; and that the respondent was negligent in not having issued any instructions to the master or officers of the "Galileo" with reference to the known danger in using a wooden bulkhead in a coal compartment unless all reasonable efforts had been made to make it airtight.

110. The Court erred in failing to find that all the witnesses from the "Galileo" conceded that they had received [fol. 776] no instructions whatever from the respondent with reference to making the wooden bulkhead airtight, and that they made no effort whatever to make it airtight.

111. The Court erred in failing to find that it was the action of pier superintendent Hicks and of stevedore Magarelli and his gang acting under personal instructions from the managing owners of the "Galileo" at Hull which caused the fire.

112. The Court erred in holding that the respondent did in fact delegate to the chief engineer or the master any duty of supervision over the execution of the order issued by the managing owner of the respondent to the respondent's New York shore agent and re-delegated by them to pier superintendent Hicks and stevedore Magarelli.

113. The Court erred in failing to hold that the respondent was personally responsible for the negligence of stevedore Magarelli in loading new coal on old in view of the fact that Magarelli was employed by and received his instructions solely from the respondent's New York shore agent, Mr. Sanderson, and who in turn received his instructions directly from the managing owners of the respondent at Hull.

114. The Court erred in failing to find that the managing owners of the respondent cabled instructions that the 850 tons to be carried to Hull for transfer to "Francisco" must be carried on the "Galileo" in her bunkers.

115. The Court erred in failing to find that the only bunker on the "Galileo" which was available for the car-
[fol. 777] riage of this coal was the No. 3 'tween deck reserve bunker in which the coal was actually loaded and which already had 160 tons of old coal in it.

116. The Court erred in failing to find that there was no reasonable or possible way in which those on the "Galileo" could comply with the managing owners' specific direction that the coal be carried in the bunkers, excepting by loading it on top of the 160 tons or in the only partially filled bunker.

117. The Court erred in failing to find that the stevedore Magarelli received all his orders and his compensation from the Jarka Company and Pier Superintendent Hicks, and that the only occasion on which Magarelli ever saw Chief Engineer Oxtoby was when Oxtoby happened to be on the deck as Magarelli climbed out of the hot bunker and the chance conversation between the two men occurred.

118. The Court erred in failing to find that it was stevedore Magarelli's negligent actions which caused the fire and that he was employed and paid to perform those actions by Pier Superintendent Hicks on personal instructions by cable from the managing owners of the respondent at Hull.

119. The Court erred in failing to hold that it was not the chief engineer of the "Galileo" who negligently loaded the excess "Francisco" coal, but that it was Magarelli acting under orders from Hicks, the pier superintendent,

who received his orders from Sanderson who was the [fol. 778] manager of the respondent's New York representative and who had received the arbitrary special order by cable directly from the managing owner of the respondent at Hull that the 850 tons be loaded on the "Galileo" in her bunkers.

120. The Court erred in failing to find that the managing owner of the "Galileo" at Hull ordered its New York shore agent by cable that the 850 tons of coal, for carriage to Hull for the "Francisco" be loaded on the "Galileo" in her bunkers; that the shore agent through Hicks, its Pier Superintendent, asked the master of the vessel what bunkers space was available in which to stow that coal shipment and that the master, after conferring with the chief engineer, reported that the only bunker space available was the No. 3 'tween deck reserve bunker in which the coal was actually loaded.

121. The Court erred in failing to find that it was the personal negligence of the managing owners of the "Galileo" at Hull which caused this fire because if they had not arbitrarily directed that the 850 tons for the "Francisco" be carried on the "Galileo" in her bunkers the coal would undoubtedly have been carried in the ordinary and usual manner as cargo in a cargo hold.

122. The Court erred in holding that the Fire Statute relieves the shipowner from liability on the warranty (both expressed in the contract of affreightment, and implied if such express warranty were absent), that due diligence would in fact be used by the shipowner and by all the vessel's officers up to the instant of sailing to make the vessel seaworthy.

[fol. 779] 123. The Court erred in not finding that the respondent had failed to establish that an unavoidable fire was the dominant cause of the damage.

124. The Court erred in failing to find that the evidence was at least as consistent with the dominant cause of damage being unseaworthiness which due diligence to make seaworthy would have prevented, as with the cause of damage being an unavoidable fire, and that therefore the respondent had failed to bring the case within the Fire Statute.

125. The Court erred in failing to find that Ellerman's Wilson Line of New York, Inc., was the managing and general representative of the respondent in connection with the operation of its liners at one of its two principal terminal ports, and that that corporation as such representative was required to use due diligence to make the "Galileo" seaworthy on sailing, and that its negligence was personal negligence of one of the managing officers of the respondent.

Bigham, Englar, Jones & Houston, Proctors for Earle & Stoddart, Inc., et als., Libellants, No. 64 Wall Street, New York City.

[fol. 780] IN UNITED STATES DISTRICT COURT

[Title omitted]

STIPULATION AS TO EXHIBITS

It is hereby stipulated and agreed by and between the proctors for the respective parties hereto, that the libellants' exhibits and respondent's exhibits which are not included in the record herein, or not included in full in the record herein, need not be reproduced in the record on appeal but may be transmitted to the Circuit Court of Appeals in their original form and may be used by either party at the argument of said appeal with the same force and effect as if said exhibits were included in the foregoing transcript of record. The following exhibits are therefore to be transmitted to the Circuit Court of Appeals in their original form and are not included, or are not included in full in the printed record on appeal:

Libellants' Exhibit 16. Printed pamphlet issued by Lloyd's in May, 1912, containing report by Chief Engineer Surveyor Milton on spontaneous combustion of coal. Only [fol. 781] pages 16 and 17, entitled "General Conclusions", being printed in record. Remainder of pamphlet not being printed.

Libellants' Exhibit 17. Official instructions issued by British Board of Trade, Marine Department, December, 1922, to Surveyors on Surface Ventilation of Coal Cargoes,

published by his Majesty's Stationery's Office. Only pages 1, 2 and the first part of page 3 up to paragraph numbered 6, being printed in the record. Remainder of pamphlet not being printed.

Libellants' Exhibit 19. Pamphlet by H. H. Stoek on Fire in Steamship Bunker and Cargo Coal, issued in 1923 by Government Printing Office, Washington. Not being printed in record.

Libellants' Exhibit 26. Lloyd's Calendar, 1926, issued by Lloyd's, London; title pages to be printed in the record, and also pages 267 to 269, relating to ventilation and risks of spontaneous combustion in bunkers and coal cargoes. The remainder of the book not to be printed.

Libellants' Exhibit 28. Pamphlet by O. P. Hood on Factors in the Spontaneous Combustion of Coal, issued in 1922 by Government Printing Office, Washington. Not being printed in the record.

Libellants' Exhibit 29. There is no Libellants' Exhibit 29. The Clerk inadvertently gave this number to the respondent's exhibit (Chief Engineer Oxtoby's voyage report) which was introduced by the respondent as "Exhibit 29" and is being printed in the record with respondent's exhibits.

[fol. 782] Respondent's Exhibit A. Mate's Log Book of "Galileo" covering period May 15, 1926, to August 22, 1926. The page containing entries August 19th to 22nd, 1926, to be included in printed record. Remainder not to be printed.

Respondent's Exhibit H. For identification, affidavit of Oxtoby re Margarelli story. Not supplied by Kirlin, Campbell, Hickox, Keating & McGrann, and, therefore, not being printed in the record.

Respondent's Exhibit J. Manifest of "Galileo" cargo for June, 1926, voyage. Not to be printed in the record.

Respondent's Exhibit L. Manifest of "Galileo" cargo for August, 1926, voyage. Not to be printed in the record.

Dated New York, June 29, 1931.

Bigham, Englar, Jones & Houston, Proctors for Libellants. Kirlin, Campbell, Hickox, Keating & McGrann, Proctors for Respondent.

[fol. 783] IN UNITED STATES DISTRICT COURT

[Title omitted]

STIPULATION AS TO RECORD

It is hereby stipulated and agreed that the foregoing is a true transcript of the record of the said District Court in the above entitled matter as agreed upon by the parties.

Dated New York, June 29, 1931.

Bigham, Englar, Jones & Houston, Attorneys for the Libellants. Kirlin, Woolsey, Campbell, Hickox & Keating, Attorneys for the Respondent.

[fols. 784-784b] Clerk's certificate to foregoing transcript omitted in printing.

[fol. 785] IN UNITED STATES DISTRICT COURT, SOUTHERN DISTRICT OF NEW YORK

EARLE & STODDART, INC., et al., Libellants,

against

ELLERMAN'S WILSON LINE, LTD., Respondent

DEPOSITION OF JOHN J. CHAPMAN

Deposition Taken on Behalf of the Respondent, at the Office of Messrs. Kirlin, Woolsey, Campbell, Hickox & Keating, No. 27 William Street, New York City, 11 a. m. March 27, 1929

Appearances:

Messrs. Kirlin, Woolsey, Campbell, Hickox & Keating (Mr. Keating and Mr. Herbert) for the respondent.

Messrs. Bigham, Englar, Jones & Houston (Mr. Jones and Mr. Nunnally) for the libellants.

It is stipulated that the testimony may be taken by a stenographer, signing, filing and certification being waived, stenographer's fees to be taxable.

JOHN J. CHAPMAN, being duly sworn and examined as a witness for the respondent, testified as follows:

By Mr. Keating:

Q. Mr. Chapman, are you a licensed chief engineer?

A. Yes, sir.

[fol. 786] Q. How long have you held a chief engineer's license?

A. About 20 years.

Q. How long have you been going to sea as an engineer?

A. About 13 years.

Q. How long have you been going to sea altogether as an engineer of any kind?

A. 31 years.

Q. Is that all with one company?

A. All with the Ellerman's Wilson Line, yes, sir.

Q. These certificates are from the British Board of Trade, are they.

A. From the British Board of Trade, yes, sir.

Q. You are at present chief officer of what vessel?

A. The "Marengo".

Q. That is an Ellerman's Wilson Line boat?

A. Ellerman's Wilson Line boat.

Q. Do you remember arriving in New York on the "Marengo" on or about September 26, 1926?

A. Yes, sir, I remember.

Q. You had arrived from Hull, had you?

A. Hull, yes, sir.

Q. Do you remember how much coal you had on board at that time, or can you refer to something which gives you the details?

Mr. Jones: Objected to, unless the testimony is shown to be relevant.

A. About 280 tons, as near as I can say.

Q. The voyage on which you sailed from New York was voyage No. 88, was it?

A. I couldn't say the exact number of the voyage, but it would be about that. The last voyage was the 100th voyage.

Q. I show you a document, and ask you whether your signature is appended to that?

A. Yes, that is my signature and these are my figures.

This writing is a clerk's on the dock.

[fol. 787] Q. What is that document, Chief?

A. Well, this states the coal we had when we arrived, and the coal we loaded here, and the coal we shifted into the permanent bunkers here, and the coal we consumed while we were in New York, and the coal we had leaving.

Mr. Keating: I offer the document in evidence.

(It is marked Respondent's Exhibit A.)

Mr. Jones: The same objection as to relevancy to all this testimony. That may be understood?

Mr. Keating: Yes.

(It is stipulated that the objection need not be repeated.)

Q. Where was the old coal?

A. Well, the greater part of the old coal would be in the lower cross bunker.

Q. That is in the lower hold, is it?

A. That is in the lower hold of the ship.

Q. That is one of the regular cross bunkers?

A. That is a cross bunker—permanent—permanent bunker of the ship—and there may have been some in the cross bunker 'tween deck, and there may have been some in the cross bunker No. 3 cargo space—about 75 tons.

Q. Before loading the new coal, did you do anything with the 75 tons of old coal that was in the 'tween decks?

A. Yes, we had that 75 tons of coal all put in the lower cross bunker.

Q. At New York?

A. At New York.

Q. In other words, you shifted it here?

A. We shifted it here—the shore people shifted it.

[fol. 788] Q. Upon your order?

A. Yes, sir.

Q. Before you loaded the new coal, did you do anything with the other coal spaces on the ship?

A. Yes, we went all around them and saw everything was all properly cleaned up and all ready to receive the new coal—all swept out and everything else.

Q. You saw that yourself?

A. I saw that myself.

Q. How much new coal did you take at New York? You can refer to your logbook if you wish, Chief.

—. Somewhere about 2,000 tons, I think.

Q. Look and give us the exact number.

A. 2,122 tons, received from Berwind White Coal Company.

Q. That was supplied by whom?

A. By the Berwind White Coal Company.

Q. Did you see it go aboard?

A. Yes, I saw it, I tallied it all on board.

Q. How did it go on board?

A. It comes alongside in craft—in barges—and they heave it up with the winch, and they put it where you want it, and you trim it away in the different spaces.

Q. Where did you put that new coal?

A. All the permanent bunkers would be filled up, made solid, and then there was coal put into No. 3 shelterdeck, No. 3 'tween deck and No. 3 lower hold.

Q. Did you have a fire after you left New York in any of your coal?

A. Yes.

Q. What was the date on which you discovered the fire?

A. (Referring to log.) The 11th of October.

Q. Where was the fire, Chief?

A. It was in the cross bunker 'tween decks.

Q. Whereabouts?

A. On the starboard side, forward part of it.

[fol. 789] Q. I show you a plan of the "Marengo", and ask you to mark with a cross on this plan the point where the fire was?

(Witness does as requested.)

Mr. Keating: I offer the plan in evidence.

(It is marked Respondent's Exhibit B.)

Q. Right at the point w-ere you marked a cross, Chief, there is a line. What is that line?

A. Well, that is a bulkhead.

Q. Is that a wooden bulkhead?

A. That is a steel bulkhead in the center, and in each wing it is a wood bulkhead, both in this deck and in this shelterdeck.

Q. I mark on here "W W". Will you tell us what "W W" consists of?

A. Consists of a wooden bulkhead in the wings and a steel bulkhead in the center.

Q. Was the fire forward or aft of that bulkhead "W W"?

A. It was aft.

Q. Right at the bulkhead, was it?

A. Yes, at the bulkhead.

Q. Will you look at Respondent's Exhibit B, and tell us what is forward of the bulkhead marked "W W"?

A. Well, at this time we were carrying an extra lot of coal, it was during the coal strike in England, and we had to take sufficient coal at New York to bring us back to New York, and of course the permanent bunkers wouldn't hold all that, so we put so much in the 'tweendeck, No. 3 'tweendeck and so much in the shelterdeck, taken off in the bunkers to put this bunker coal in. I can't say exactly how it is on there (indicating Respondent's Exhibit B), from this bulk-[fol. 790] head "W W" to the fore part of the coal here it was 26 feet.

Q. That point was filled with coal?

A. That was full of coal, from this line we have marked there——

Q. Let's mark that line "B B". Now, what is this line "B B" marked on that Respondent's Exhibit B?

A. That is the wood bulkhead where the coal extends from the cross bunker bulkhead.

Q. That is from bulkhead "W W" to bulkhead "B B" was a space filled with coal?

A. That is right, a space of 26 feet.

Q. Entirely filled with coal, was it?

A. Entirely filled with coal.

Q. Was that new coal or old coal?

A. That was all new coal of Berwind White's. That was put in that voyage in New York.

Q. There was also coal aft of the bulkhead marked "W W", was there?

A. Oh, yes. That is the permanent bunker, and this is the permanent bunker. There was coal right along here up to that bulkhead at that time. It is marked on this drawing here——

Q. Let's mark it "C C".

A. That is now marked on there "Refrigerating Machinery". That space was taken off of this "Refrigerating Machinery" space some later time after the fire occurred.

Q. In other words, the coal extended aft to the bulkhead "C C"?

A. Yes.

Q. Now, the point that I have my pencil resting on—is that a permanent bunker?

A. That is a permanent bunker.

Q. We will mark that "P". Now, was that new or old coal?

A. That was new coal. All the old coal we had was in this lower cross bunker.

Q. We will mark that "A". All the old coal was in the [fol. 791] cross bunker in the lower hold marked "A"?

A. That is right.

Q. Before you loaded new coal, what had you done to the spaces between bulkhead "B B" and bulkhead "C C"?

A. Well, we had it all properly cleaned up to receive this new coal.

Q. Was it all clean-swept?

A. It was all clean-swept, the whole lot.

Q. There was no old coal in there at all?

A. No. All the old coal we had was in this cross bunker marked "A".

Q. What did you do about the fire? Will you look at the logbook and give us the details of the fire?

A. (Referring to log.) On the 11th of October, 1926, smoke found its way from cross bunker 'tweendecks at 9 A. M. Side pockets shut down and all coal worked from the cross bunker. At ordinary times this cross bunker, it only feeds three fires, and the side bunkers feed each wing boiler, three fires in each wing boiler, but to get this coal worked up quicker, we shut down the sides and took everything from the center, so we could get to where this smoke was coming from. In other words, we burned nine fires from there instead of three.

Q. Did you eventually get to the fire?

A. Yes, we worked all that day, the nine fires, and we worked the next day, and we located the fire, where the smoke was coming from, on the 12th of October, that is the next day on the 8 to 12 watch.

Q. And where was it, Chief?

A. It was on the starboard side 'tweendeck bunker.

Q. Did you eventually get right to the point of the fire?

A. Yes, we kept working all the nine fires from there,

and then we got the sailors in with our own men, and we [fol. 792] shifted the coal from the sides into the middle, from the 'tweendecks where this smoke was coming from, and then on the 14th at 9 o'clock in the morning we put steam on the fore deck and we jettisoned 40 tons of coal, put it over the side, and that was the live coal, that was the live fire.

Q. You actually got to the exact spot?

A. Yes.

Q. And where was that exact spot?

A. That exact spot that I mark "X" on the plan (Respondent's Exhibit B).

Q. Was the wooden bulkhead burned at all?

A. Yes, the wooden bulkhead was burned at the bottom, about 4 feet up.

Q. And did the fire extend forward from "X"?

A. Yes, it went each side of the bulkhead, of course being a wooden bulkhead, the bulkhead had fired, and it extended about, I should say, 3 feet on the forward side of the bulkhead.

Q. Was that fire on the steel deck?

A. On the steel deck, yes.

Q. Was there any evidences of fire or heat down in the lower hold?

A. No, not in the lower bunker.

Q. Did you have any other fire in that coal?

A. Yes, we had a slight fire on the port side in practically the same place on the port side.

Q. What do you mean by the same place on the port side —directly opposite?

A. Yes, directly opposite, on this 'tweendeck at the bulkhead on the port side. This fire where we jettisoned the coal was on the starboard side, and we had some hot coal on the port side but we didn't have to jettison any of that, it wasn't so serious as the starboard side.

Q. And you eventually got to that, too?

A. We eventually got that out, heated.

[fol. 793] Q. Forward of bulkhead marked "B B" on the plan, was there cargo?

A. Yes, this was cargo along here (indicating).

Q. And between that cargo and the fire was this 26 feet of coal between bulkheads "B B" and "W W"?

A. Yes. As I say, this fire extended about 3 feet along here.

Q. 3 feet forward of bulkhead "W W"?

A. Yes.

Q. Who selected the place for the coal—the new coal?

A. The captain and myself.

Q. Did the shore people have anything to do with that?

A. No, they had nothing whatever to do with it, we did it ourselves, we had this coal to take, and we measured the distance off and then we bulkheaded it off and put the coal in there.

Q. Why did you have to take this extra coal?

A. On account of this coal strike in England, we couldn't bunker in England.

Q. You had to take coal for the round?

A. We had to take coal in New York to bring us back to New York.

Q. Did you have any general instructions from your owners about the care of coal?

A. We use our own discretion and look at the coal, if it wants moving we have it moved.

Q. What has your practice been about that?

A. Well, you watch the coal and you see there is any signs of its heating, you get it moved.

Q. Do you work out the old coal first?

A. Oh, yes.

Q. Well, now, did you—you actually did shift—why did you shift this 75 tons of old coal from the 'tweendecks?

A. We put that all in the lower bunkers so that we should have a clear space for the new coal.

[fol. 794] Q. You work out of the cross bunker first, do you?

A. Yes.

Q. How long had what we have been calling the old coal been in the ship?

A. I couldn't say.

Q. Was it American coal?

A. Well, it would be a mixture of English and American coal.

Q. You don't know how long it had been there?

A. No, I couldn't say how long it had been in the ship.

Q. But it had been there a long time?

A. It had been there all of 5 months—I couldn't say.

Q. What was the cause of the fire in the new coal?

A. The only thing I could put it down to was spontaneous combustion.

Q. Can you think of anything else?

A. Nothing that I know of.

Q. Chief, I notice in this Respondent's Exhibit B, that the capacity of some of the spaces at least is marked in tons of coal. Is that English coal or American coal?

A. That is English coal on that drawing. On that drawing the spaces are marked 50 cubic feet to the ton, but with American coal you can only run about 40 cubic feet in a ton, so consequently you get much more American coal in the space than you would English coal.

Q. About 20% more coal?

A. Yes, about 20% more coal, I would say about that.

Q. You have produced here your logbook for the voyage in question, Chief?

A. Yes.

Mr. Keating: I ask that the logbok be marked for identification.

(It is marked Respondent's Exhibit C for Identification.)

[fol. 795] Mr. Jones: The cross examination is without waiving my objection as to relevancy.

Cross-examination.

By Mr. Jones:

Q. I understood from you that there was a coal strike in England at the time that you have been testifying to?

A. That is so.

Q. Do you know when their strike began?

A. No, I should say it began—I think somewhere about May.

Q. That is your recollection?

A. Yes.

Q. That it began in May, 1926?

A. I think so, but I wouldn't swear to that.

Q. I also understood you to say that the cause of your carrying such a large quantity of coal was because of this coal strike?

A. That is right.

Q. It is not the usual practice for the Ellerman's Line ships, such as the "Marengo" and "Galileo" to carry this large quantity of coal?

A. No.

Q. It is quite an unusual situation you had to deal with?

A. That is so. In ordinary times we bunker in Hull to take the ship a round voyage back to Hull.

Q. And to take this type of coal in this quantity at New York was quite unusual for your line?

A. Yes.

Q. I also understood you to say that the coal which was shifted—the old coal which was shifted—was all shifted by shore people?

A. Yes.

Q. Whom do you mean by shore people?

A. The stevedores, they sent a gang on board and they shifted the coal.

Q. Where did you get those people—did you make an ap-
[fol. 796] plication to the shore superintendent for these men to come there and shift the coal?

A. No, it is an understood thing, if you will allow me to explain. Our bunkers, they do not hold sufficient coal to take the ship a round voyage. When we bunker in Hull there is so much coal put in the No. 3 lower hold, and every voyage when we get to New York that has to be shifted by the shore people into the permanent bunkers.

Q. That is permanent orders for the shore people to do that?

A. Yes.

Q. And these men come on board?

A. Yes.

Q. Under directions from your shore office to shift this coal?

A. Yes—well, it has always been the practice, as long as I have been on the ship, for these people to come on board.

Q. Who orders them to come on board?

A. I don't know. The coal has to be shifted, and they come on board and shift it, and always have done.

Q. That is part of the routine of your line?

A. Yes.

Q. And they are sent on board by somebody on shore, you don't know who?

A. They come on board every voyage to shift the coal.

Q. You don't know where they get the orders from to shift this coal?

A. No, I don't know where they get the orders from, they come down and shift it.

Q. And they shift that without saying anything to you? They come on board and report they come to shift the coal?

A. They come on board and they ask what coal there is to shift, and then I tell them the amount and they start in and shift this coal into the bunkers wherever I want it put in.

Q. You have told us about some fires that you had in the coal. That is not the only fire you had during that [fol. 797] summer?

A. No, we had a fire the voyage previous. You could hardly call it a fire, there was no jettisoning or anything of that sort.

Q. Let's see what your logbook says about that. I find an entry the 21st of August, 1926, "Coal in port shelterdeck very heated, engaged working it out."

A. Yes, that is right.

Q. Then I find an entry on the 23rd of August, "Engaged working coal out of port and starboard shelterdeck, assisted by deckhands."

A. Yes.

Q. Then I find an entry on the 24th of August, 1926, "Reached fire in port side shelterdeck 3 P. M." That is correct, isn't it?

A. That is correct.

Q. August 25th, "Reached fire on starboard side shelterdeck 1.30 P. M."

A. Yes, sir.

Q. Then on the 26th of August, I find this entry, "Coal still heated on port and starboard shelterdeck. Engaged working it out."

A. Yes, that is right.

Q. You made a report, I suppose, of that to your owners when you got here?

A. Well, no, we just—it wasn't a fire really—it was heated coal, and we tunneled down to it and used it up gradually.

Q. You want to be frank about this. On the 27th of August, 1926, a further entry, "Waste pipe case on port and starboard shelterdeck found on fire. Extinguished same." That was caused by that coal fire, wasn't it?

A. Yes, that is where the fire was.

Q. You reported about that waste pipe casing, didn't you, being burned?

A. Well, we had it renewed when we got home.

Q. And you reported to your company's offices?

A. Yes, we intended for the steam pipe wood casing to be renewed, and it was renewed.

[fol. 798] Q. And in order to get it renewed, you had to make a report of that fire, did you not?

A. Yes.

Q. What was the cause of that fire?

A. The same thing, I suppose.

Q. Spontaneous combustion?

A. I suppose so.

Q. Have your owners ever told you about the various warnings that have been given with respect to spontaneous combustion in coal, by Lloyd's and other agencies—have they ever given you any instructions about that?

A. No.

Q. What is the normal amount of coal that you would have on board leaving New York, provided there was no coal strike?

A. Provided there was no coal strike, we would have about 900 tons.

Q. Whom do you report to when you get to New York?

A. Well——

Q. What is the usual routine of your company when you come in?

A. I report to the captain what coal we have remaining.

Q. To whom do you make that report?

A. To the captain.

Q. Do you make any report—you have here, Respondent's Exhibit A, Ellerman's Wilson Line, New York, Inc., Pier foot of 7th Street, Hoboken, New Jersey, signed J. J. Chapman—that seems to be a memorandum that is filed away at the Ellerman's Wilson Line's office in Hoboken?

A. Yes.

Q. To whom do you hand this paper which you sign?

A. To the clerk on the pier.

Q. And when do you do that?

A. Just before the ship sails.

Q. When the ship comes in, do you report the amount of coal you have got on board, so you will know how much to order on shore?

A. I tell the captain the amount of coal we have on board, and how many days' coal we have.

[fol. 799] Q. To whom does he make his report ashore as to how much coal you are to receive?

A. I don't know who he makes his report to.

Q. You know he makes it to anybody?

A. Yes, we reckon to have 20 days' coal on board leaving New York.

Q. You know the danger of spontaneous combustion in coal, having had two fires yourself?

A. Yes.

Q. That is something that is commonly known—that coal is liable to spontaneous combustion, isn't it?

A. Yes.

Q. Now, I take it from what you have said to Mr. Keating that this space which is between the line which Mr. Keating marked "B B" and " WW" on Respondent's Exhibit B, was the space which you temporarily used for coal on this voyage?

A. That is so.

Q. And ordinarily that space is not used for coal?

A. That is cargo space.

Q. And it is only in case of emergency that that space is used for coal?

A. Only in case of carrying a large quantity—bunker her to come back.

Q. And the only time you ever used that space for carrying coal was during the coal strike?

A. Quite so.

Q. The "Galileo" was owned by the same people as the "Marengo"?

A. Yes.

Q. And you are still employed by that same company?

A. Yes.

Q. Do you have a scrap logbook as well as the smooth log?

A. No, we use a slate.

Q. You spoke of the shore people coming aboard to shift coal. How did that practice grow up, do you know?

A. I don't know, it was under way when I came in the ship—that is over six years ago.

[fol. 800] Q. Do they always shift all of the old coal out of the upper bunkers, down into the lower bunkers?

A. No, in ordinary times the coal we have to shift is in No. 3 lower hold.

Q. Where do they put that?

A. Into the permanent bunkers.

Q. In other words, you have coal in your cargo space?

A. Coming out, yes, on the outward passage.

Q. That is the lower hold?

A. The lower hold.

Q. And then you shift it out of the lower hold into the permanent bunkers?

A. Yes.

Q. How about the old coal you have in other bunkers what do you do with that? Do these people who come aboard shift that, too?

A. No, we don't have that shifted, not without you require it shifted. If you require it shifted you can have it shifted.

Q. This logbook doesn't go beyond the 18th of August. Did you have any heating of coal before the 18th of August?

A. Not that I remember.

Q. You don't remember about that?

A. I don't remember.

Q. Is there any log entry here with respect to the amount of coal which you had when you arrived in New York?

A. (Referring to log) Leaving Quarantine here on the 26th of September, remained at noon, 301.18 tons of coal. Arriving New York, 279 tons; total consumed since yesterday, 22.18 tons.

Q. Do you make an abstract of this logbook when you get to New York?

A. I make an abstract log out for the voyage from leaving Hull to getting back to Hull.

Q. To whom is that delivered?

A. That is delivered into our office—into the engineers' office when we get home.

[fol. 801] Mr. Keating: At Hull?

The Witness: At Hull.

Q. Do you make any report here?

A. In New York?

Q. Yes.

A. No.

Q. Except this one with respect to the coal (Respondent's Exhibit A)?

A. Yes.

Q. You apparently began loading your bunker coal on the 29th of September, 1926?

A. Yes.

Q. And you finished loading your bunker coal on the 1st of October, 1926?

A. Yes.

Q. And your ship sailed on the 9th of October, 1926?

A. Yes.

Q. Is that the usual practice, to take coal on about ten days or a fortnight before you sail?

A. No. We take it before they finish the cargo, so there is space alongside of the ship, so the coal barge alongside of the ship doesn't interfere with the cargo.

Q. The usual practice is to take the coal aboard before you finish with the cargo?

A. Before we finish loading the cargo, yes.

Q. Where did you get your last English coal, do you remember—you said your old coal was a mixture of American and English coal—where did you get your last English coal?

A. The voyage prior to the coal strike.

Q. That would be the voyage prior to May, 1926?

A. Yes. I am not saying the coal strike—I can't say when the coal strike started.

Q. I understand your testimony to be that you don't remember accurately the date when the coal strike started, that your impression or your recollection is that it began in May, 1926?

A. Yes.

Q. That you may be in error in that respect?

A. That is so.

[fol. 802] Q. And that the last English coal which you took, a part of which you still had in your bunkers, you got on the voyage before the strike broke out, whenever the strike broke out?

A. Yes.

Q. I have stated your testimony accurately?

A. Yes.

Redirect examination.

By Mr. Keating:

Q. Chief, do I understand that when there is no coal strike, during the period which you call ordinary times, that you fill your regular cross bunkers in Hull, and also carry in No. 3 lower hold some English coal?

A. That is so.

Q. And the purpose of taking the English coal in No. 3 lower hold is to use on the voyage home?

A. That is so.

Q. When you told Mr. Jones that it was an ordinary practice to have the people come on board to shift the coal, were you referring to the normal times when you had to have that coal in No. 3 shifted, in order to use in your bunkers?

A. Yes.

Q. What were you referring to?

A. I will just tell you the exact state of affairs. When you leave Hull, you take about 1600 tons of coal in this ship to bring you back again to Hull—that is in normal times without any coal strike. Our bunkers in this ship will hold about perhaps 1050 or 1100; well, the balance from that 1100 to the 1600 is put down in No. 3 lower hold, and when you get to New York, it is taken out of No. 3 lower hold and put in the permanent bunkers.

Q. Was that what you were referring to, when you said the shore people came on board?

A. Yes.

[fol. 803] Q. Were you referring to anything else—any other general practice?

A. No.

Q. Who was it, if anybody, in your company or on the ship that decided what other coal was to be shifted, if any, when the times were not normal?

A. I would decide that myself.

Q. And you would give orders to whom?

A. I could see the stevedore who shifts the coal and tell him we wanted it shifted.

Q. Would you tell him what coal you wanted shifted and where you wanted it shifted?

A. Yes.

Recross-examination.

By Mr. Jones:

Q. As I understood you, you made it quite plain to me that when these people came on board to shift this coal which you were carrying during the coal strike, and which was not English coal, you did not order them on board—they came on board in accordance with their usual practice?

A. During the coal strike there wouldn't be any coal to shift, because you would only have about 260 tons arriving here, and that would be in the cross bunker, and there would be no American coal to shift at that time. You only have this coal to shift when you have this 500 or 600 tons of coal from home to shift at normal times, and during this strike there wouldn't be any of that to shift, because you would only have 200 or 300 tons on board.

Q. You and I are talking at cross purposes. You told me that when your ship got here—I think it was in August or September, 1926—that you had some coal in the 'tween-decks, and that these people came aboard from the shore to shift the coal. Now, I asked you at that time who [fol. 804] ordered those people to come aboard, and you said you didn't know, that the people came aboard from shore?

A. Oh, I ordered them to shift this 75 tons of coal.

Q. That isn't the point, as to what you ordered them to do. I asked you who ordered those people aboard the ship, and you said they came aboard as a routine matter. Didn't you tell me that?

A. Yes.

Q. And that is true?

A. Yes.

Q. They came aboard as a routine matter to shift the coal?

A. Yes, but it wouldn't have been shifted if I hadn't wanted it shifted, it was up to me to want it shifted.

Mr. Jones: I move to strike that out as not responsive.

Q. I put the question again to you—isn't it a fact that these shore people came aboard your ship, the "Marengo", for the purpose of shifting coal, and that you did not order

those people to come aboard but they had received their orders from some shore person—isn't that true?

A. Yes, but I ordered this coal to be shifted.

Mr. Jones: I move to strike out the latter part of the answer and leave only the word "Yes" in.

Q. Another thing I want quite clear on the record—I think I understand it, but I don't want a mistake about it—when you carry English coal, you use the lower hold to store your coal in excess of the capacity of your permanent bunkers?

A. That is so.

Q. But when you carried this American coal, you used [fol. 805] the 'tweendecks for the purpose of storing your excess coal?

A. Yes.

Q. That is correct, is it?

A. Yes.

Q. Isn't it true also that for the purpose of carrying this American coal, a wooden bulkhead was built in the 'tweendecks in order to separate this excess coal from the cargo?

A. I don't know whether it was built or not, but it was there, I don't know whether it was built specially for the job or not.

Q. Ordinarily it is not there, is it?

A. Yes, I believe it is there normal times.

Q. You have a permanent wooden bulkhead in there?

A. I don't know, because that is cargo space, and I don't know a great deal about cargo space.

Q. This is supposed to be a plan of your ship (Respondent's Exhibit B), and looking at the plan I couldn't see any indication of a permanent bulkhead at the line "B B".

A. (Referring to Respondent's Exhibit B) I don't know whether there is a permanent bulkhead there or not, but I know when we had this fire there was a bulkhead there.

Q. And that bulkhead would be built there by shore people?

A. I suppose the ship's people would build it.

Q. Where would they get timber to build it?

A. I don't know where they would get timber to build it, I suppose the carpenter and sailors would build it.

Q. Do you carry that quantity of timber aboard ship?

A. We have a tremendous amount of timber on board.

Q. You have dunnage?
A. Yes.
Q. That is about all, isn't it?
A. Yes.
[fol. 806] Q. Don't you know this bulkhead was built by shore people?
A. I don't know—that is cargo space.
Q. You don't know one way or another?
A. No.

Redirect examination.

By Mr. Keating:

Q. When you talked about shore people coming aboard in normal times to shift coal, are you referring to the coal stevedores?
A. Yes.
Q. Are the people that load the coal that is going into the ship, different from the people that come on to shift the coal?
A. No.
Q. Well, when people come on board from the shore, whom are you referring to—the coal stevedores?
A. Yes.
Q. And those are the people that are going to load and trim the new coal that comes into the ship?
A. Yes.
Q. And they actually are on the ship when you see them, is that right?
A. They come on board the ship.
Q. And if you want anything done regarding any of the old coal, what do you do?
A. I see the foreman and tell him I want it shifted.
Q. You just go up to the foreman, who is there with the coal stevedores, and tell him what you want, is that right?
A. That is right.
Q. And with respect to this 75 tons that was shifted this time, is that what you did?
A. Yes.

[fol. 807] RESPONDENT'S EXHIBIT A

Memorandum

From Ellerman's Wilson Line, New York, Inc.

Pier, Foot of 7th Street Hoboken, N. J., to Marengo, Voy. 88

Coal on board on arrival	249 T	O. c
Coal loaded on board	2122 T	O. c
Coal shifted to bunkers	45 T	O. c
Coal consumed	68 T	12c.
Coal on board leaving	2332 T	8c.

J. J. Chapman, Chief Engineer.

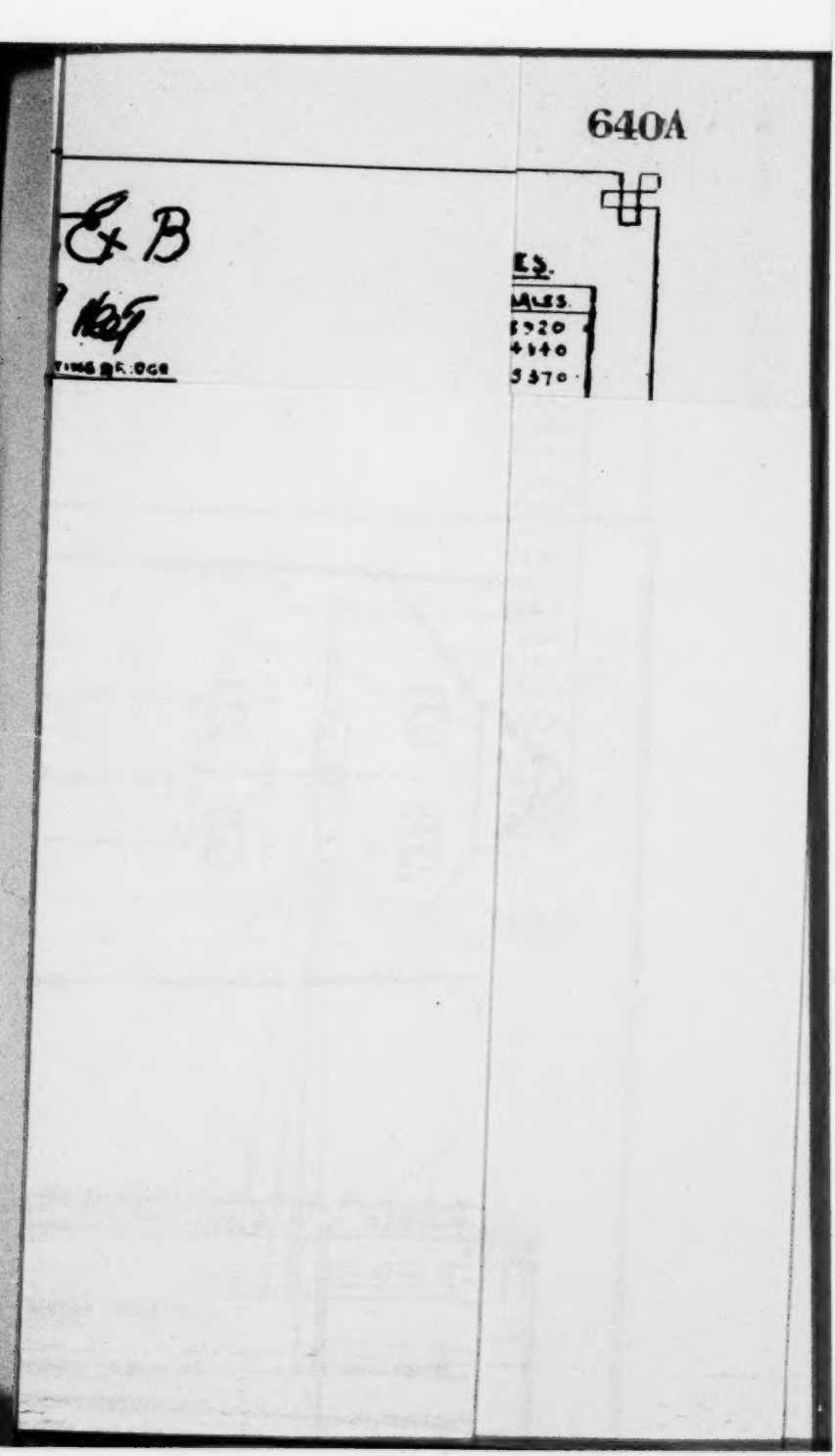
[fol. 808] RESPONDENT'S EXHIBIT B

Plan

(Photoprint)

FOLD OUT IS TOO LARGE TO BE FILMED

(Here follows Respondent's Exhibt B, side folio 809)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[fol. 810] IN UNITED STATES CIRCUIT COURT OF APPEALS FOR THE SECOND CIRCUIT

EARLE & STODDART, INC., et al., Libellants-Appellants,

against

ELLERMAN'S WILSON LINE, LTD., Owner and Operator of the Steamship "Galileo", Respondent-Appellee

STIPULATION AS TO SUPPLEMENTAL RECORD

It is hereby stipulated and agreed that the foregoing supplemental record on appeal in the above entitled case may be filed in the office of the Clerk of the Circuit Court of Appeals for the Second Circuit.

Dated New York, September 15th, 1931.

Bigham, Englar, Jones & Houston, Proctors for Libellants-Appellants. Kirlin, Campbell, Hickox, Keating & McGrann, Proctors for Respondent-Appellee.

[fol. 811] IN UNITED STATES CIRCUIT COURT OF APPEALS FOR THE SECOND CIRCUIT

EARLE & STODDART, INC., et al., Libellants-Appellants,

vs.

ELLERMAN'S WILSON LINE, LTD., Owner and Operator of the Steamship "Galileo," Respondent-Appellee

Before Manton, Swan, and Augustus N. Hand, Circuit Judges

Appeal from the District Court of the United States for the Southern District of New York

Libel in personam in the admiralty by numerous cargo owners against Ellerman's Wilson Line, Ltd., for the loss of the libellants' goods by the burning and resultant sinking of the vessel upon which they were being carried. From

a final decree of dismissal the libellants appeal. Decree affirmed.

The opinion below is reported in 45 F. (2d) 231.

Bigham, Englar, Jones & Houston, Proctors for Appellants; T. Catesby Jones, James W. Ryan, Advocates.

Kirlin, Campbell, Hickox, Keating & McGrann, Proctors for Respondent-Appellee; Cletus Keating, James H. Herbert, Advocates.

OPINION

SWAN, Circuit Judge:

Ellerman's Wilson Line, Limited, a British corporation, [fol. 812] was the owner and operator of the steamship Galileo, which in August 1926 set out upon a voyage from New York to Hull, England, carrying the libellants' goods as cargo. Within six hours of her departure, fire was discovered in the coal carried in a temporary bunker in No. 3 'tween deck. The vessel immediately put about and returned to the Port of New York, where she subsequently sank, as a result of efforts to extinguish the fire, with a total loss of her cargo. The present suit charges a breach of contract in failing to deliver the cargo at destination, and the respondent pleads in defense the so-called fire statute (R. S. sec. 4282; 46 U. S. C. A. sec. 182), to which the bills of lading issued to the cargo owners expressly referred.

The parties agree that the fire was the proximate cause of the loss; and the district court has found that the fire was caused not by any neglect of the owner but by the gross negligence of the ship's chief engineer in putting new coal on top of old coal at a time when the old coal had become so hot in spots as to burn the boots of the trimmers, and after the chief engineer had been warned by the foreman of the coal trimmers of this condition. The new coal was taken on a day or two before the Galileo sailed, so that at the commencement of her voyage there existed within her, as the court expressly found, a condition so dangerous that a bunker fire was inevitable. Therefore, within authoritative definitions of seaworthiness (The Sylvia, 171 U. S. 462, 464; The Southwark, 191 U. S. 1, 9) the Galileo was unseaworthy when she sailed, and this was due

to her chief engineer's negligence. Under these circumstances, the libellants' contend, her owner may not claim exoneration from liability under the fire statute. This contention presents the main issue of this appeal.

[fol. 813] Section 4282 is in substance section 1 of the Limited Liability Act of March 3, 1851 (9 Stat. 635). It provides that no owner of a vessel shall be liable to make good any loss or damage to cargo caused by fire, "unless such fire is caused by the design or neglect of such owner". The phrase "neglect of such owner" means negligence of the owner personally, or, in the case of a corporate owner, negligence of its managing officers or agents, and it is perfectly clear under the authorities that negligence of the ship's officers in causing a fire is not to be imputed to the owner so as to deprive him of the statutory immunity. Walker v. The Transportation Co., 3 Wall. 150; Craig v. Continental Ins. Co., 141 U. S. 638, 646; Keene v. The Whistler, Fed. Cas. No. 7645 (D. Cal.); The Strathdon, 89 F. 374 (E. D. N. Y.); The Strathdon, 94 F. 206, aff'd, 101 F. 600 (C. C. A. 2). So far as we are advised, in all cases where exoneration from liability under the fire statute has been denied, there has been proof that the fire was due to the negligence of the owner himself or of some representatives of the owner other than the ship's officers and crew. Arkell & Douglas v United States, 13 F. (2d) 555 (C. C. A. 2); Bank Line v. Porter, 25 F. (2d) 843 (C. C. A. 4); Charbonnier v. United States, 45 F. (2d) 166 (E. D. S. C.), affirmed in 45 F. (2d) 174 (C. C. A. 4); Williams S. S. Co. v. Wilbur, 9 F. (2d) 622 (C. C. A. 9); Hines v. Butler, 278 F. 877 (C. C. A. 4); The Elizabeth Dantzler, 263 F. 596 (E. D. Va.).

Conceding this to be the law when the ship is seaworthy at the commencement of her voyage, the libellants contend that the rule is different when she sets out in an unseaworthy condition and due diligence has not been used by [fol. 814] the ship's officers to make her seaworthy. The libellants ask, in effect, that to the exception expressed in the statute—"unless such fire is caused by the design or neglect of the owner"—we add as a further exception "or unless such owner or his agents have failed to use due diligence to make the vessel seaworthy". There is no language in the Limited Liability Act to justify such a judicial amendment. The requirement of due diligence to make the

vessel seaworthy is expressly made a condition to claiming the benefits of the Harter Act (27 Stat. 445), and lack of diligence by any agent of the owner may be imputed to the owner. Int. Nav. Co. v. Farr & Bailey Mfg. Co., 181 U. S. 218. But we find nothing in the Limited Liability Act which makes such diligence a condition precedent to the exoneration granted by section 4282. Nor can it be urged that the Harter Act has modified the former statute, for section 6 of the Harter Act expressly declares the contrary. (27 Stat. 446.)

Our statute was taken from an earlier British Act (26 Geo. III c. 86), as was pointed out in Norwich Ins. Co. v. Wright, 80 U. S. 104, 117, and the present British statute 57 and 58 Vict. c. 60, sec. 502, par. (i) is very similar to our own. Hence the construction put upon their statute by the British courts has a peculiar significance, additional to any weight to be accorded to the general desirability of uniformity in British and American law in matters maritime—a consideration noted in Queen Ins. Co. v. Globe & Rutgers Ins. Co., 263 U. S. 487, 493. Under the British law it seems to be well settled that a shipowner does not lose exemption from liability for loss by fire because the ship's [fol. 815] officers have failed to exercise due diligence to make the ship seaworthy when her voyage starts. Virginia-Carolina Chemical Co. v. Norfolk & North Am. S. S. Co. [1912] 1 K. B. 229; Ingram & Royle v. Services Maritime [1914] 1 K. B. 541; Tempus Shipping Co. v. Louis Dreyfus & Co., 40 Lloyd's L. L. 217, 219. The case of Royal Exchange v. Kingsley Nav. Co., Ltd., 1923 A. C. 235 construing the Canadian Act is distinguishable both on the facts and on differences in the statutes. It is more like the Harter Act than the fire statute, and the last sentence of paragraph 7 requires that the loss shall arise not only without "actual fault or privity" of the owners but also "without the fault or neglect of their agents, servants or employees."

The libellants argue that whatever the British law may be, our decision must be rendered in their favor because of The Malcolm Baxter, Jr., 277 U. S. 323. While the fire statute was not involved in that litigation, limitation of liability under section 4283 was, and the libellants seize upon the following language at page 331:

"Both courts below agreed that the Baxter was unseaworthy on sailing and that respondent failed to exer-

cise due diligence to ascertain her condition before sailing. This was sufficient ground for denying the petition for exoneration and limitation of liability under the Harter Act, Act of February 13, 1893, c. 105, 27 Stat. 445, and acts permitting limitation of liability to the vessel and pending freight. R. S. secs. 4282-4289. * * *''

It will be noticed that the failure to exercise due diligence was referred to as that of the respondent, the vessel owner. Had it been only that of the vessel's master, the benefits of the Harter Act would have been lost but not the benefits of the Limitation of Liability Act, under the authorities. Section 4283 (46 U. S. C. A. sec. 183) permits limita- [fol. 816] tion of liability for loss or damage to cargo caused ''without the privity or knowledge of the owner''. The phrase quoted has been construed to refer to some personal fault of the owner or his ''higher representatives'', and not to exclude limitation merely because of negligence on the part of the ship's officers. See Craig v. Continental Ins. Co., 141 U. S. 638; La Bourgogne, 210 U. S. 95; Lord v. Goodall S. S. Co., Fed. Cas. No. 8506 (C. C. Cal.); The Republic, 61 F. 109 (C. C. A. 2); The 84-H, 296 F. 427 (C. C. A. 2); Arkell & Douglas v. United States, 13 F. (2d) 555, 558 (C. C. A. 2); In re Spender Kellogg & Sons, 52 F. 129 (C. C. A). We feel confident that the Supreme Court did not intend by this brief reference to the limitation statute to modify the long established construction of the phrase ''without the privity or knowledge of the owner''. Unseaworthiness of a vessel has nothing to do with limitation of liability by the owner unless it exists with the owner's privity or knowledge. Lack of diligence to make the vessel seaworthy is, therefore, immaterial unless it is within the owner's privity or knowledge. Unless this be borne in mind, the use of the phrase ''lack of diligence to make seaworthy'', which under the Harter Act is not limited to the owner's personal failure in diligence, may well lead to confusion when applied to the Limitation Act. In the case of The Malcolm Baxter, Jr., as appears from the decision of the district court (not officially reported), the vessel's hull had defects which an inspection would have disclosed but the owner did not provide a suitable person to inspect the vessel, which it had purchased without any warranty of seaworthiness in the bill of sale.

[fol. 817] Hence the lack of diligence was the owner's, and the loss resulting from unseaworthiness was within the owner's "privity". So understood the case is quite in line with earlier authorities. In the case at bar, however, the lack of diligence was that of the chief engineer and the owner was not only not in privity with the engineer's default but was found by the court to be free from personal neglect. Therefore, The Malcolm Baxter would not be inconsistent with allowing limitation under section 4283, and is even less inconsistent with allowing exoneration under section 4282. In so far as The Etna Maru, 20 F. (2d) 143 (S. D. Tex.), affirmed upon another ground in 33 F. (2d) 232 (C. C. A. 5) supports the rule contended for by the libellants, we cannot follow it.

The libellants attempt to attribute to the ship-owner personal neglect contributing to the dangerous conditions which resulted in the outbreak of the fire. It is argued that the respondent was chargeable with personal neglect (1) in not notifying Huff, the cargo surveyor, that the coal put in No. 3 'tween deck was being carried for delivery to another of respondent's ships, (2) in not having a shore superintendent to supervise coaling at New York, (3) in not requiring a more rigid inspection of the bulkhead in No. 3 'tween deck, (4) in providing a bulkhead not air tight, and (5) in acquiescing in the practice of placing new coal on old. All these charges except the first have been satisfactorily dealt with in the opinion below, and we find it unnecessary to add to what is there said. The charge of fault in failing to notify Huff that 850 tons of the coal taken on board at New York were not to be used on the [fols. 818 & 818-a] Galileo but were intended for another vessel was apparently not urged below. In our opinion it is without merit. Huff was employed by the New York Board of Underwriters, although his fee for surveying the Galileo's cargo was paid by the respondent. He knew that coal was being carried in No. 3 'tween deck but did not consider it his duty to inspect the coal bunkers, and he testified that it would have made no difference to him whether the coal were bunker or cargo. The failure to notify him was immaterial. Indeed, if the respondent was under a duty to have the loading of coal inspected by any one other than the ship's officers, it should have appointed a shore superin-

tendent for that purpose. That contention was adequately disposed of below, and the denial of it is in substance a denial of the charge now made regarding a failure to have an inspection by Huff. The district court rightly found the owner free from personal fault.

It is urged that the bills of lading issued to Earle & Stoddart, Inc., and to Sanday & Co. were the personal contracts of the respondent to which the limitation acts do not apply. Assuming these contracts to have been personal, they expressly incorporated the exemption accorded by section 4282. The contention that all the bills of lading waived this exemption is also without merit.

Decree affirmed.

[fol. 819] In United States Circuit Court of Appeals, Second Circuit

Earle & Stoddard et al., Libellants-Appellants,

v.

Ellerman's Wilson Line, Ltd., Respondent-Appellee

Decree—Filed Dec. 28, 1931

Appeal from the District Court of the United States for the Southern District of New York

This cause came on to be heard on the transcript of record from the District Court of the United States for the Southern District of New York and was argued by counsel.

On consideration whereof, it is now hereby ordered, adjudged, and decreed that the decree of said District Court be, and it hereby is, affirmed, with costs.

It is further ordered that a Mandate issue to the said District Court in accordance with this decree.

Wm. Parkin, Clerk.

[File endorsement omitted.]

[fol. 820] Clerk's certificate to foregoing transcript omitted in printing.

[fol. 821] SUPREME COURT OF THE UNITED STATES

ORDER ALLOWING CERTIORARI—Filed April 18, 1932

The petition herein for a writ of certiorari to the United States Circuit Court of Appeals for the Second Circuit is granted. And it is further ordered that the duly certified copy of the transcript of the proceedings below which accompanied the petition shall be treated as though filed in response to such writ.

Endorsed on cover: File No. 36,623. U. S. Circuit Court of Appeals, Second Circuit. Term No. 20. Earle & Stoddart, Inc., et al., owners of cargo on steamship "Galileo," petitioners, vs. Ellerman's Wilson Line, Ltd., owner of steamship "Galileo." Petition for a writ of certiorari and exhibit thereto. Filed March 19, 1932. File No. 36,623.